

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No.77/GT/2013

Coram:

**ShriGireesh B. Pradhan, Chairperson
ShriA.K.Singhal, Member**

Date of hearing: 03.06.2014

Date of Order: 12.11.2015

IN THE MATTER OF

Determination of generation tariff in respect of 262.5 MW gross capacity sale from Kamalanga Power Plant of GMR-Kamalanga Energy Ltd to GRIDCO for the period from 1.4.2013 to 31.3.2014.

And in the matter of

GMR-Kamalanga Energy Limited,
Skip House, 25/1 Museum Road,
Bangalore-560 025

.....Petitioner

Vs

1. GRIDCO Limited
Janpath, Bhubaneswar-751 022, Orissa
2. Western Electricity Supply Company of Orissa Limited
Burla, Sambalpur, Orissa
3. Southern Electricity Supply Company of Orissa Limited
Courtpetta, Berhampur (GM) 760 004
4. North Eastern Electricity Supply Company of Orissa Limited
Januganj, Balasore, Orissa
5. Central Electricity Supply Utility of Orissa
2nd Floor, IDCO Tower, Janpath,
Bhubaneswar-751 022

.....Respondents

Parties Present:

For petitioner:

Shri Amit Kapur, Advocate, GKEL
Shri Vishrov Mukerjee, Advocate, GKEL
Shri Rohit Venkat V., Advocate, GKEL
Shri V. AkshayaBahu, GKEL
Shri Rohan Jadhav, GMR
Shri Tarun Mahajan, GMR
Shri Jatinder Kumar, GMR

For Respondent:

Shri R.B. Sharma, Advocate, GRIDCO



ORDER

This petition has been filed by the petitioner, GMR-Kamalanga Energy Ltd (GKEL) for determination of tariff for supply of 262.5 MW power to GRIDCO Ltd (GRIDCO), the first respondent, from Stage-I of Kamalanga Thermal Power Plant (the Project) having a total capacity of 1400 MW for the period from the actual date of commercial operation (COD) of Unit Nos. I, II and III till 31.3.2014, in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”). The power purchased by GRIDCO is further supplied by the first respondent in bulk to the other respondents for ultimate supply to the consumers. The actual COD of the Units of the project are as under:

	Actual COD
Unit-I	30.4.2013
Unit-II	12.11.2013
Unit-III	25.3.2014

Background

2. Govt. of Odisha signed a Memorandum of Understanding (MOU) dated 9.6.2006 with the petitioner for setting up a 1000 MW thermal power plant in the State. Later on, the capacity of the Project was increased to 1400 MW and was to be executed in two stages, Stage I comprising 3 units of 350 MW each and Stage II comprising one unit of 350 MW. Pursuant to the MoU, The petitioner has executed the Power Purchase Agreement dated 28.9.2006 (PPA) with GRIDCO valid for a period of 25 years from the date of execution for supply of 25% of the power generated. Stage I of the Project has been awarded the status of Mega Power Project by the Central Government under Ministry of Power letter dated 16.3.2009. The evacuation of power from the power plant is through the 400 kV Meramundali-Talcher LILO for Odisha's share of power. The PPA was approved by Odisha Electricity Regulatory Commission (the Odisha Commission) under clause (b) of sub-section (1) of Section 86 of the Electricity Act by order dated 20.8.2009. In the said order dated 20.8.2009 the Odisha Commission approved the PPAs executed between GRIDCO and other Independent Power Producers (IPPs) also.



Subsequently, the petitioner executed a revised PPA dated 4.1.2011 whereby it was agreed that supply of power to GRIDCO would include supply from the additional capacity of 350 MW to be set up by the petitioner in Stage II. The State Commission while approving the PPA by its order dated 20.8.2009 had directed GRIDCO and the IPPs (which included the petitioner) to file the petitions under Section 62 read with clause (b) of sub-section (1) of Section 79 of the Electricity Act before this Commission for approval of tariff since in the opinion of the State Commission the power projects to be established by the petitioner and other IPPs were inter-State generating stations. Pursuant to the above observations of the State Commission, the petitioner filed Petition No. 20/MP/2012 for approval of provisional tariff for supply of power to GRIDCO. During the proceedings in that petition it emerged that in addition to execution of the PPA for supply of power to GRIDCO, the petitioner had signed agreements for supply of power to the distribution companies in Haryana through PTC and Bihar State Electricity Board (BSEB) after selection through the competitive bidding process adopted under Section 63 of the Electricity Act. This Commission in its order dated 16.5.2012 after taking note of the above factual position observed that supply of power to the distribution companies through PTC after selection through the competitive bidding was outside the scope of determination of tariff and therefore, the petitioner did not satisfy the requirements of having the composite scheme for generation and sale of electricity in more than one State under clause (b) of sub-section (1) of Section 79 of the Electricity Act. Accordingly, this Commission dismissed the petition as not maintainable. The petitioner was, however, advised by the said order to approach the Commission for approval of tariff after it has entered into the composite scheme for sale of power in more than one State. The present petition for approval of tariff for supply of electricity to GRIDCO has been filed by the petitioner in terms of the liberty granted by order dated 16.5.2012.

3. The petition was heard on 23.5.2013 and 25.7.2013 on the issue of jurisdiction of this Commission to determine the tariff of the generating station of the petitioner under Section 62



read with Section 79(1)(b) of the Electricity Act, 2003 (the Act) for sale of 262.5 MW of power from the Project to the respondent No.1 for ultimate supply to the consumers through other respondents. Accordingly, orders in the petition were reserved.

4. While so, the question of jurisdiction was examined by this Commission in Petition Nos.79/MP/2013 and 81/MP/2013 filed by the petitioner for adjudication of certain issues pertaining to the Project and the Commission by a common order dated 16.12.2013 upheld its jurisdiction to adjudicate the issues raised in these petitions based on the finding that the Project is an inter-State generating station whose tariff is to be regulated by the Commission by virtue of clause (b) of sub-section (1) of Section 79 of the Act. The relevant portion of the order dated 16.12.2013 is extracted as under:

“32. There is yet another fact which bears notice. The Project has been accorded the status of Mega Power Project by Ministry of Power by letter dated 16.3.2009. One of the essential conditions for grant of Mega Power Project status under the Mega Power Policy of the Central Government is that the supply from the generating station would be to more than one State. Therefore, it is implicit in the Mega Power Project status that the petitioner supplies power to more than one State. Such supply has necessarily to be through the composite scheme.

33. To sum up, it is held that supply of electricity by the petitioner to the States of Odisha, Haryana and Bihar is under the composite scheme for generation and sale of electricity in more than one State. Accordingly, this Commission has power to regulate the tariff of the generating station of the petitioner under clause (b) of sub-section (1) of Section 79 of the Electricity Act, 2003. As a corollary it follows that the powers of adjudication of the claims and disputes involving force majeure and Change in Law events under the PPAs is vested in this Commission.”

5. In terms of the findings contained in order dated 16.12.2013 in Petition Nos. 79/MP/2013 and 81/MP/2013 as aforesaid, the Commission by its order dated 3.1.2014 held that the instant petition filed by the petitioner for determination of tariff of the Project for supply of power to the respondent No.1 is amenable to the jurisdiction of the Commission and accordingly maintainable. Against the said order dated 16.12.2013, some of the respondents therein, including GRIDCO have filed appeals (Appeal Nos. 44 and 74/2014) before the Appellate Tribunal for Electricity (Tribunal) and the Tribunal by its interim order dated 30.5.2014 has observed that the proceedings before this Commission was subject to the outcome of the



pending appeals. These appeals are pending. Accordingly, the tariff of the Project (1050 MW) of the petitioner determined by this order shall be subject to the final outcome of the pending appeals.

6. The tariff petition was heard on 3.6.2014 and the Commission directed the petitioner to submit certain additional information.

7. The petitioner has filed the additional information as sought by the Commission and has served copy of the same on the respondents. The respondent, GRIDCO has filed replies in the matter and the petitioner has filed its rejoinder to the same. Both the parties have filed written submissions in the matter. Based on the submissions of the parties and the documents available on record, we proceed to determine the tariff of the Project(1050 MW) from the COD of Unit Nos. I, II and III till 31.3.2014, on prudence check, as stated in the subsequent paragraphs.

8. The capital cost of Units I to III (excluding cost of Unit-IV) and the annual fixed charges claimed by the petitioner are as under:

Capital cost

	<i>(₹ in lakh)</i>		
	As on COD of Unit-I (30.4.2013)	As on COD of Unit-II (12.11.2013)	As on COD of Unit-III (25.3.2014)
Capital cost excluding IDC FC, FERV & Hedging Cost	224857.00	357630.00	536765.00
IDC, FC, FERV & Hedging Cost	33223.00	71497.00	94266.00
Other Cost	0.00	0.00	3684.00
Capital Cost including IDC,FC, FERV & Hedging Cost	258080.00	429127.00	634715.00
Less : Capital cost of Unit-IV	0.00	0.00	41072.00
Capital cost excluding cost of Unit-IV	258080.00	429127.00	593643.00



Annual Fixed Charges

(₹ in lakh)

	2013-14		
	30.4.2013 to 11.11.2013	12.11.2013 to 24.3.2014	25.3.2014 to 31.3.2014
Depreciation	13413.48	23284.78	32973.84
Interest on Loan	41919.92	49816.02	55624.03
Return on Equity	21896.53	33636.48	39591.63
ED on Auxiliary Power Consumption	507.67	1015.34	1523.00
Water charges	1205.68	1205.68	1205.68
Interest on Working Capital	5843.10	10624.82	15166.75
O&M Expenses	6996.50	13993.00	20989.50
Secondary fuel oil	1456.04	3174.72	5148.24
Annual Fixed Charges	93238.93	136750.83	172222.67

Commissioning schedule

9. The Commission vide ROP of the hearing dated 3.6.2014 had directed the petitioner to submit the copy of original investment approval and subsequent revised approval, if any, from the Board of Directors along with scheduled COD of different units/station. In response, the petitioner vide affidavit dated 31.7.2014 has submitted that the EPC agreement was signed on 28.8.2008 and the project cost estimated at ₹4540 crore was approved by Board of Directors of Petitioner Company on 8.4.2009. It has also submitted that on 27.5.2009, the lenders consortium led by IDFC Bank had appraised and approved the project cost and the project achieved financial closure. The petitioner has further stated that the Notice to Proceed (NTP) was issued on 27.5.2009 and since the construction could only commence after financing had been tied up and financial closure was achieved, the commencement date was considered from the date of financial closure and the NTP i.e. 27.5.2009. It has also submitted that the EPC contractor had specified the timeline of 30 months, 32 months, 34 months for achieving the COD of Unit-I, Unit-II and Unit-III respectively from the commencement of construction of project, which was the date of financial closure i.e. 27.5.2009. Accordingly, the estimated scheduled COD dates as against the actual COD dates from the date of financial closure /notice to proceed is detailed as under:



Unit Nos	Date of financial closure	Schedule COD	Actual COD	Delay (in months)
I	27.5.2009	27.11.2011	30.4.2013	17
II		27.1.2012	12.11.2013	22
III		27.3.2012	25.3.2014	24

10. According to petitioner, there is delay of 17 months in case of Unit-I, 22 months in case of Unit-II and 24 months in case of Unit-III. It is further observed from the MOU dated 9.6.2006 entered into between Govt. of Odisha and the petitioner, the time schedule for commissioning of the project from the date of signing the MOU is 60 months i.e. by 9.6.2011. It appears that the timeline in the MOU was specified based on the agreement reached between the Govt. of Odisha and the petitioner with respect to assistance and co-operation on the areas of land acquisition, construction power etc. It is also observed from the MOU that the petitioner was required to produce documents towards financial closure for Phase-I within 18 months from the date of MOU. Thus, the financial closure as per MOU should have been completed by December, 2007 and the remaining 42 months up to 9.6.2011 was the scheduled time for commissioning of the project. However, the PPA entered into with the respondent, GRIDCO on 28.9.2006 does not prescribe any timeline for the COD of units/generating station. Under these circumstances, it would not be prudent to consider the schedule timeline as per MOU dated 9.6.2006. In this background, we consider the schedule COD of units/ generating station as computed by the petitioner based on the timeline (from financial closure date/NTP date) specified in the EPC contract entered into on 28.8.2008.

Admissibility of Additional Return on Equity

11. The date of original investment approval for the project is 8.4.2009. In order to avail the additional ROE of 0.5%, the time line specified under the 2009 Tariff Regulations for completion of a green field project (Coal/lignite) with a unit size of 350 MW from the date of investment approval is 33 months with subsequent units at an interval of 4 months each. The petitioner has submitted that the power plant suffered delay in commissioning due to reasons beyond the control of the petitioner like delay in handover land by Govt. of Odisha and Change in Visa



Policy. The petitioner has submitted that it has invested 39% of the project cost as equity and should be favourably considered for allowing additional 0.5% ROE on the normative 30% equity, which translated to overall 16% ROE.

12. The matter has been examined. The actual COD of Unit-I, Unit-II and Unit-III is 30.4.2013, 12.11.2013 and 25.3.2014 respectively i.e. 48 months, 54 months and about 59 months from the date of investment approval (8.4.2009). Hence, all the three units of the Project have been declared under commercial operation beyond the timeline specified under the 2009 Tariff Regulations for entitlement of additional RoE of 0.5%. Hence, we are not inclined to grant the prayer of the petitioner for grant of additional ROE of 0.5%. Accordingly, the generating station is not entitled to the additional return on equity of 0.5% which is allowed for timely completion of the Project.

Time over run

13. As stated, there is time overrun of 17 months for Unit-I, 22 months for Unit-II and 24 months for Unit-III. Accordingly, the petitioner was directed vide ROP dated 3.6.2014 to submit additional information as under:

“(vi) There appears to be time overrun in Commissioning of units/station. Reasons may be furnished with documentary evidence, in justification of time and cost over-run. Delay (quantifying the number of days/months/year) in the execution of various activities on the critical path in completion of the project through the CPM/PERT chart may also be explained with documentary evidence.”

14. In response, the petitioner vide affidavit dated 31.7.2014 has submitted the reasons for the delay in the commissioning of the units based on the following events:

- (a) Delay of 7 months in Land Acquisition for main plant for all three Units;*
- (b) Change in law in terms of the Visa Policy of the Govt of India: Non-availability of skilled and experienced foreign workers for 10 months for Unit-I, 11 months for Unit-II and 13 months for Unit-III;*
- (c) Delay of 3.5 months for permission to conduct COD post synchronization of Unit-II due to high hydro conditions and grid constraints limiting evacuation to 350 MW only;*
- (d) Delay of 4 months for permission to conduct COD post synchronization of Unit-II due to grid constraints limiting evacuation to 350 MW only.*



15. We now examine the submissions of the parties on the issue of time overrun in the subsequent paragraphs:

Delay in completion of Land Acquisition

Submissions of the Petitioner

16. The petitioner vide affidavits dated 5.3.2013 and 31.7.2014 has submitted as under:

(a) The process of acquiring 823.32 acres of land for the main project area began in July, 2007 with the issue of relevant notice under Section 4(1) of the Land Acquisition Act, 1894. As per the MOU, the power plant had to be developed within 60 months from the date of execution of MOU, i.e. by 9.6.2011. An aggregate 1176.24 acres of land earmarked for the Project was to be acquired by the Government through its nodal agency–Odisha Industrial Infrastructure Development Corporation (“IDCO”) and handed over to the petitioner ‘free from all encumbrances’. However, the Project land could not be acquired by the Government of Odisha / IDCO and handed-over to the petitioner in time for various reasons and circumstances such as delays due to land acquisition related litigations and resistance from locals. The land acquisition was the responsibility of the Government of Odisha / IDCO. The agreement with the EPC contractor (SEPCO) was executed on 28.8.2008 and the NTP was issued on 27.5.2009. As per the EPC agreement, the total land for the project was to be handed over to the EPC contractor not later than two months (27.5.2009) from the date of issue of NTP. The project completion schedule as committed by the contractor was premised on the critical obligation to be fulfilled by the petitioner. Due to circumstances and reasons beyond the control of the petitioner, not only the acquisition was delayed, but the land delivery came in staggered lots. The possession of the major portion of land (more than 50%) required for the main project area was handed over to the petitioner only by 11.2.2010. The details of hand over of possession of land areas under:

Village	Area (in acres)	Date of notice u/s 4(1) of LA Act,1894	Date of possession by the Petitioner
SenapathiBerana	82.49	12.7.2007	24.9.2009
Bhagabatpur	35.40	-do-	24.9.2009
Managalpur	190.12	-do-	24.9.2009
Kamalanga	515.31	-do-	11.2.2010
Total	823.32	-	-

(b) The details of possession of different categories of land as submitted by the petitioner are as under:



Sl. No	Land Details	Date of Handing over	Location of System/Subsystem
i	Government Land	9.2.2010	BTG-1 & 2, Pre-treatment Plant, CT-2 , MGR Coal conveying system
ii	Private Land	11.2.2010	Transformer yard, Switchyard, CT-1, Roads, Drains, MGR, Coal conveying system, CWPH -2
iii	Left out Plots-Mangalpur (Pvt)	20.4.2012	MGR and Coal conveying system, Track Hopper
iv	MGR Land after vacation of Status quo	31.10.2012	MGR outside plant from Railway land to plant boundary.
v	Forest Land	12.12.2012	BTG-3, Chimney-2, CT-3coal conveying system, CWPH -1
vi	Left out Plots-Kamalanga(Pvt.)	14.12.2012	Coal Conveying system, BTG-1, Clinker Grinder-1

(c) IDCO failed to acquire 32.55 acres of land spanning across 206 plots which comprised the main project area including the BTG area. This seriously delayed the project timelines since possession of the aforesaid 32.55 acres was handed over to the petitioner only in December, 2012.

(d) Forest clearance for the total forest land area of 78.03 acres to be used for BTG, Coal Handling Plant (CHP) and other critical area such as cooling towers, chimney etc., which were under the Main Project Area, was granted by the Central Government on 7.1.2011 and possession of land handed over to the petitioner on December, 2012.

(e) Not only delays were witnessed in acquiring land for the main project area but also for the land required for railway siding, approach road, raw water pipeline, etc. The construction of railway line (MGR) was delayed on account of a status quo order passed by the Hon'ble High Court of Orissa on 6.4.2012 in the Writ Petition No. 5559 of 2012 filed challenging the land acquisition for the Project. This order continued to be in force till 19.10.2012 when the status quo order was vacated by the High Court. Accordingly, it was unable to take possession of the land required for the construction of the railways line (MGR) on account of the status quo order in force and the delay was on account of operation of law over which the petitioner had no control and for no reason attributable to the petitioner. The final possession of land was handed over on 31.10.2012. The petitioner was required to construct the Direct Approach Road (DAR) providing access to the plant premises and in the absence of DAR and MGR Railway line, it was impossible to transport coal and other consumables essential for commissioning of the project.



Land required for construction of Direct Approach Road

17. The petitioner has submitted that Writ petitions were filed before the High Court of Orissa challenging the land acquisition proceedings covering about 3 acres of land which is forming part land acquired by IDCO for the DAR and status quo orders were passed in respect of possession of the aforesaid land. The petitioner has also submitted that it was unable to take possession on account of the aforesaid status quo orders and accordingly was prevented from completing the DAR on account of operation of law for reasons beyond its control. These status quo orders were vacated by the High Court on 20.8.2013 which had resulted in a delay of 1486 days. In addition, the petitioner has stated that it was unable to take possession of land required for construction of DAR on account of status quo order dated 26.3.2013 which was vacated on 20.8.2013 and this delayed the construction by six months. The petitioner has stated that in the absence of DAR and MGR the required quantity of coal could not be brought to project to run by 6 months even a single unit to its full capacity. It has further stated that the Hon'ble High Court imposed restriction on plying of heavy vehicle between 6 AM to 8 PM and allowed vehicles to ply only from 8 PM to 6 AM and this could carry maximum of 200 trucks a day which is significantly below the requirement of even one unit.

Delay in laying Transmission line

18. The petitioner has submitted as under:

(a) The Government of India vide gazette notification No. 11/44/2011-PG, published the order under Section 164 of the Electricity Act, 2003 in respect of GMR Kamalanga Energy Limited (the petitioner) for construction of dedicated 400 kV transmission line from the generating station of petitioner to Angul pooling station of PGCIL in Orissa and by virtue of the said order the petitioner has been conferred powers for the purpose laying 400kV dedicated transmission line from the generating station of petitioner to Angul pooling station of PGCIL in Orissa.

(b) In this regard, when GKEL was carrying out the above work one M/s BRG Iron and Steel Company Private Limited alleged that a portion of the land on which the transmission lines are being laid in the village Kurunti was allotted to their company and therefore demanded GKEL to direct its contractor to stop the work forthwith. Further, the said company used



physical force to stop the work by GKEL and as a result GKEL was constrained to file a complaint with the police against obstruction to its work of laying transmission lines which is of statutory in nature. The issue was further challenged by BRG in the Orissa High Court and Orissa High Court directed BRG to approach land allotment agency i.e. IDCO to address the issues raised by BRG in accordance with law. Pursuant to the said orders of the High Court, IDCO had requested OPTCL to intervene in this matter for finding an amicable solution. Accordingly, a meeting was held between the parties on i.e. BRG, GKEL, IDCO and OPTCL, on 19.2.2014 and in the said meeting BRG suggested alternate alignment for the said 400kV transmission line of GKEL. GKEL objected to the said alternate proposal as GKEL has lost valuable time and money in laying the transmission line and GKEL would be put to serious difficulties if the construction of transmission line is not completed at the earliest for evacuation of power from GKEL power plant. In the said meeting OPTCL also participated and after prolonged deliberation GKEL had to agree for change in the alignment as per the revised proposal submitted by BRG subject to approval by OPTCL. Pursuant thereto the parties have agreed to the route map showing the realignment of transmission line in terms of the minutes of the meeting dated 19.2.2014.

19. Accordingly, the petitioner has submitted that the aforesaid chain of events would clearly indicate that despite best efforts of GKEL there was a delay of 17 months in laying the dedicated 400kV transmission line from the generating station of the petitioner to Angul pooling station of PGCIL in Orissa for the reasons which are beyond the control of petitioner.

Delay in Handing over of Right of Way (ROW) for River intake pipeline

20. The petitioner has submitted as under:

(a)The permission for the land on which intake pipeline was to be constructed was delayed, thereby delaying the completion of Raw water intake system from the river Brahmani to the Plant reservoir.

(b)The RoW issue was resolved on 13.6.2012 and the pipeline work of 1.9 km was completed on 23.11.2012. Though the Boiler hydro test was completed on 19.3.2012, the Boiler light up could only be completed on 3.12.2012, within 10 days of completion of the Raw water intake system.

(c)The delay in construction of water intake pipeline had an impact on the Boiler Light Up (BLU) of Unit-I delaying by 488 days from the original schedule. (Schedule completion is



4.8.2011 and the actual completion of BLU is 3.12.2012). The particulars as submitted by the petitioner are as under:

Sl. No.	Particulars	Date	Remarks
1	Scheduled commencement of Raw water intake pipe line	27.1.2011	250 days for completion of the activity
2	Scheduled commencement of Raw water intake pipe line	3.10.2011	
3	Issue of ROW order for Raw water intake pipeline	13.6.2011	Annex-6
4	Actual commencement of Raw water intake pipe line	10.3.2011	Annex-6
5	Actual commencement of Raw water intake pipe line	23.11.2012	Annex-6
6	Scheduled date for Boiler Light Up of Unit-I	4.8.2011	Annex-6
7	Actual date for Boiler Light Up of Unit-I	3.12.2012	The light up was completed within 10 days of completion of Raw water pipeline. Delay from schedule is 488 days

Delay in Handing over of Railway Land

21. The petitioner has submitted as under:

(a) The possession of land for Railway line was handed over on 31.10.2012 and subsequently work which was stopped due to the status quo order passed on 19.2.2013, was vacated by Hon'ble High Court on 20.8.2013. Due to this a critical retaining wall of 40 m length along with it the embankment work, Track laying & other related activities were held up.

(b) Due to the delayed allotment of possession of land for Railway siding work & the subsequent status quo order, the work had to be frequently started and stopped. The frequent starting and stopping of work required the demobilization & remobilization of manpower, Plant & Machinery for the aforesaid work. Despite the delayed start and intermittent stoppage of work, the aforesaid work was completed within 187 days.

(c) This impacted the COD of Unit-II which was immediately commenced on 8.11.2013 and was completed on 11.11.2013, despite all system being ready since synchronization on 9.7.2013.

Submission of Respondent, GRIDCO

22. The respondent, GRIDCO vide affidavit 17.2.2014 has submitted that Unit-I of plant was to be commissioned within a period of 30 months from NTP dated 27.5.2009 i.e. by 27.11.2011. It has thus submitted that as against this schedule, the expected COD of Unit-I is 1.4.2013



resulting in a time over-run of more than 16 months. Similarly, the respondent has pointed out that there is time overrun of 17 months for Unit-II and 18 months for Unit-III. Accordingly, the submissions of the respondent, GRIDCO are as under:

(i) The problems related to the delay in land acquisition are the general problems and the petitioner is well aware of such problems. The petitioner is expected to explain each and every day's delay in the completion of the project through the CPM/PERT chart, explaining the delay and the cushion, if any, available in the execution of various activities on the critical path. The major portion of land measuring 823.32 acres out of the total requirements of 1176.24 acres was made available to the petitioner well in time. The balance land was also made available to the petitioner subsequently. It is further stated that it is erroneous to presume that all the activities related to the execution of the project would commence only when the entire land is made available to the petitioner 'free from all encumbrances.

(ii) The problem related to the alleged delay in the construction of the railway line (MGR) on account of status quo order passed by the Hon'ble High Court of Odisha is concerned, it is stated that the substantial portion of the land was in the possession of the petitioner and only a small portion of the land to the extent of Acres 1.37 decimal was required to be vacated. During the hearing in the W.P (C) No. 5559 of 2012, Hon'ble High Court was also intimated that the construction of the plant has been completed.

23. Accordingly, the respondent has submitted that the petitioner has not established that the time over run in respect of the project under consideration was beyond his control. It has also submitted that the IDC and IEDC for the time overrun period may not be allowed.

Analysis & Decision

24. We have examined the matter. The Tribunal in its judgment dated 27.4.2011 in Appeal No. 72 of 2010 (MSPGCL-v- CERC &ors) has laid down the following principle for prudence check of time over run and cost overrun of a project as under:

"7.4. The delay in execution of a generating project could occur due to following reasons:

i. Due to factors entirely attributable to the generating company, e.g., imprudence in selecting the contractors/suppliers and in executing contractual agreements including terms and conditions of the contracts, delay in award of contracts, delay in providing inputs like making land available to the contractors, delay in payments to contractors/suppliers as per the terms of contract, mismanagement of finances, slackness in project management like improper co-ordination between the various contractors, etc.

ii. Due to factors beyond the control of the generating company e.g. delay caused due to force majeure like natural calamity or any other reasons which clearly establish, beyond any



doubt, that there has been no imprudence on the part of the generating company in executing the project.

iii. Situation not covered by (i) & (ii) above.

In our opinion in the first case the entire cost due to time over run has to be borne by the generating company. However, the Liquidated damages (LDs) and insurance proceeds on account of delay, if any, received by the generating company could be retained by the generating company. In the second case the generating company could be given benefit of the additional cost incurred due to time over-run. However, the consumers should get full benefit of the LDs recovered from the contractors/supplied of the generating company and the insurance proceeds, if any, to reduce the capital cost. In the third case the additional cost due to time overrun including the LDs and insurance proceeds could be shared between the generating company and the consumer. It would also be prudent to consider the delay with respect to some benchmarks rather than depending on the provisions of the contract between the generating company and its contractors/suppliers. If the time schedule is taken as per the terms of the contract, this may result in imprudent time schedule not in accordance with good industry practices.

7.5 in our opinion, the above principle will be in consonance with the provisions of Section 61(d) of the Act, safeguarding the consumers ' interest and at the same time, ensuring recovery of cost of electricity in a reasonable manner."

25. The petitioner has submitted that the delay due to land acquisition was outside the reasonable control of the petitioner. It is noticed that in terms of the MOU dated 9.6.2006 entered into by the petitioner with the Govt of Orissa, 2200 acres of land (approx) was required for the setting up the Thermal Power Plant and associated facilities (colony, coal transportation system, water transportation system, power evacuation system, ash disposal and other infrastructural facilities) by the petitioner. However, an aggregate of 1176.24 acres of land earmarked for the project was to be acquired by the Govt. of Orissa through its nodal agency, IDCO and handed over to the petitioner free from encumbrances. The petitioner has submitted that even though the process of acquiring 823.32 acres of land (out of the total requirement of 1176.24 acres) for main plant area began in July, 2007 with the issue of notices under Section 4(1) of the LA Act, 1894, the project land could not be acquired by the Govt. of Odhisa/IDCO to be handed over to the petitioner in time due to various reasons and delays on account of land acquisition litigation and resistance from locals. The respondent, GRIDCO has submitted that the problems related to the delay in land acquisition are general problems and the petitioner is well aware of such problems. It has further submitted that the major portion of land measuring 823.32 acres out of total requirement of 1176. 24 acres was made available to the petitioner



well in time, and that the petitioner cannot presume that all the activities for execution of the project would commence only when the entire land is made available to the petitioner free from all encumbrances. It is noticed from the EPC contract dated 28.8.2008 entered into by the petitioner with SEPCO (Chinese EPC contractor) that the 'commencement date' is defined as the date on which NTP is issued to offshore supplier. NTP was issued on 27.5.2009 and the total land for the project was to be handed over to the EPC contractor not later than two months from the date of issue of NTP. It is also noticed that as per Article 2 of the said EPC contract, the petitioner (owner) is required to obtain all owner permits as may be required prior to the issue of NTP. It is further noticed that land acquisition has been delayed and the delivery of land to the petitioner materialized in a staggered manner starting from 24.9.2009 (Senapathi Berana) and culminated on 9.2.2010 when 515.31 acres of land (Kamalanga) was delivered to the petitioner. Accordingly, the petitioner has claimed the initial delay of 7 months in starting the construction activities due to delay in acquisition of land for the main plant on the ground that it is beyond its control. The petitioner has also submitted that the responsibility of land acquisition was that of Govt. of Odisha/IDCO under MOU dated 9.6.2006 and project land could not be acquired by the Govt. of Odisha/IDCO for handing over the same to the petitioner in time due to various reasons and delays on account of land acquisition litigation and resistance from locals. We are not convinced with the submission of the petitioner that the Govt of Odisha /IDCO alone was responsible for the delay in acquisition of land for the following reasons:

(i) In terms of the provisions of Land Acquisition Act, 1894, as amended from time to time, acquisition of land for public purposes, whether in respect of Government land, private land or forest land are all to be undertaken through Governmental authorities and therefore, the MOU provided for facilitating the acquisition of land through the Govt of Odisha/IDCO.

(ii) The provisions of the PPA do not provide that the responsibility towards land acquisition would be that of Govt of Odisha/IDCO.



26. Though the petitioner has submitted that the Project land could not be acquired by the Government of Odisha / IDCO and handed over to the petitioner in time for reasons such as delays due to land acquisition related litigations and resistance from locals, no documentary evidence has been furnished by the petitioner in support the same. In the absence of any proper justification, it cannot be held that the delay due to land acquisition was attributable to the Govt of Odisha/IDCO. In our view, there has been slackness on the part of the petitioner in coordinating with the District Administration to ensure the timely completion of the process of acquisition of land for main plant. In this background, we hold that the said delay in the acquisition of land cannot be said to be beyond the control of the petitioner and the petitioner is responsible for the said delay.

27. It is further noticed from the submissions and the documents furnished by the petitioner that there has been delay on account of Forest clearance as the total forest land area of 78.03 acres (to be used for BTG, CHP, Cooling Towers etc.,) which was under the main plant area was granted by the Central Govt. on 7.1.2011, thereby resulting in the delay in completion of Coal Handling Plant and other critical portions of the power station. In addition to this, delays have also been noticed towards acquisition of land for Railway siding, Direct Approach Road on account of the Writ Petitions and Status quo orders passed by the Hon'ble High Court of Orissa. Only after the status quo orders were vacated during the years 2012 and 2013, the petitioner could obtain possession of this land for construction of MGR, Construction of DAR etc. It is observed that the stay order granted in March, 2012 was vacated by the Hon'ble High Court of Orissa only on 19.10.2012 and accordingly, the land was handed over to the petitioner on 31.10.2012. However, from the details submitted by the petitioner it is not clear as to why the petitioner could not acquire the said land prior to March, 2012 and why it had to wait till March 2012. In the absence of any proper clarification in the information submitted, the petitioner cannot be absolved of its responsibility for acquisition of land through timely action and proper coordination with the District Administration. As regards the delay in the Construction of DAR on account of the stay order of the Hon'ble Court, we are of the view that the petitioner could have



explored some alternate route for DAR. In this background, we are inclined to hold that the delay in Construction of DAR was not beyond the control of the petitioner. It is further noticed that there has been delay in the permission for use of land for raw water pipeline and the delay is of 488 days in the Boiler light up of Unit-I. However, no proper and cogent justification has been furnished by the petitioner for the delay in permission for Right of way. In the circumstances, we hold that the delay on this count is not beyond the control of the petitioner and the same is attributable to the petitioner. Accordingly, in terms of the principles laid down by the Tribunal in the judgment dated 27.4.2011 [(situation (i))], the initial delay of 7 months including the delays in the completion of MGR/Coal handling system, Construction of DAR and Construction of Raw water pipe line cannot be said to be beyond the control of petitioner and hence cannot be condoned. Therefore, the increase in cost on account of the said delay has to be borne by the petitioner. However, the Liquidated Damages (LD) and Insurance proceeds if any, received by the generating company, on account of the said delay, could be retained by the generating company.

Changes in Visa policy

Submissions of the Petitioner

28. The petitioner vide affidavits dated 5.3.2013 and 31.7.2014 has submitted as under:

(a) The EPC contractor (SEPCO) is a Chinese EPC contractor having significant experience in constructing power plants across the world. After the notice to proceed was issued on 27.5.2009, the EPC contractor was supposed to mobilize work at the site in June 2009.

(b) Ministry of Commerce and Industry, GOI, issued circular dated 20.8.2009, asking all foreign nationals engaged in executing the projects to leave the country by 30.9.2009. On 8.9.2009, the Ministry of Labour & Employment, GOI, announced new norms according to which only 1% of the total number of persons employed in the Project or a maximum of 20 persons would be considered for granting visas for the power sector. Based on the said norms, Ministry of Home Affairs, GOI on 28.10.2009, issued clarifications on work related visa, limiting the number of visas to be granted to persons employed in the Project to 1% of the total number of persons employed in the project or 40, whichever was lower. Due to the restriction on the maximum number of visas that could be granted, the EPC contractor, who was supposed to have a sizable number of skilled work-force from overseas had to sub-contract the erection and construction works



to local contractors. The local contractors did not have adequate resources and experience with the highly technical and advanced machinery to execute the work as per the construction schedule envisaged and agreed. Also, since the implementation strategy was disrupted due to the restriction on number of foreign nationals, the supply of machines which were linked to the progress of the project at the project site was also delayed.

(c) As per EPC contract, the schedule deliveries of EPC equipment were to start in November, 2009. However, because of the non-availability of Chinese workers and the need to replace them with Indian workers, the delivery dates as well as the time taken to complete the deliveries were severely delayed.

(d) This delay is in addition to the delay of over 12 months for land acquisition. This was on account of SEPCO being unable to deploy the requisite number of experienced foreign workers on account of change in Visa policy which was an event beyond the control of petitioner. Also, due to the restriction on the number of foreign personnel in terms of the new Visa policy, the EPC work had to be sub-contracted to Indian sub-contractors who were not familiar with the processes and machinery leading to delay in completion of EPC work. The change in Visa Policy is not only a Force Majeure but is also in the nature of a change in law which had an adverse impact on the financial health of the project.

(e) The two events, viz. delay due to land acquisition and Change in Visa policy are sequential events. The Visa policy changes started affecting the construction schedule after the land for the Main Project area was almost acquired, while the land was acquired in February, 2010, the Visa related clarifications/new norms were issued by relevant Ministries of GOI during October/December, 2009, which affected the scheduled manpower deployment once the construction started in February, 2010.

(f) The events set out as above resulted in significant delay in the project construction activity and thereby a major increase in the Project cost by way of increase during construction, other project costs elements namely, manpower cost, establishment cost also had an impact in the delivery schedule of the equipment at project site.

Submissions of the respondent, GRIDCO

29. The respondent, GRIDCO has mainly submitted as under:

(i) As regards the problem related to the alleged changes in the Visa policy for allowing foreign workers to work in India based on the Circular dated 20.8.2009 of Ministry of Commerce and Industry, GOI and O.M dated 8.9.2009 issued by the Ministry of Labour & Employment, GOI, the same is without any basis. It is submitted that the circular dated 20.8.2009 is merely a clarification on the issue of Visa provisions for foreign personnel coming for execution of the project/contractual works in India. This circular only clarifies the issue that the foreign nationals coming for execution of the project will have to come under the Employment Visa and not under Business Visa. Thus, this circular does not reflect any change in the policy of the Govt. of India regarding the Visa provisions for



foreign personnel coming for execution of the project. The O.M dated 8.9.2009 covers only the projects of the public sector undertakings and thus the norms as mentioned in the said OMs are not applicable to the petitioner.

Analysis & Decision

30. We have examined the matter. As regards the Change in Visa policy by the Government of India for Chinese nationals, it is observed that the Ministry of Commerce and Industry, GOI, by its letter dated 20.8.2009 had issued clarification on the requirement of Visa for foreign nationals engaged in execution of projects/ contractual work in India. Subsequently, by letter dated 25.9.2009 further clarification was issued by the Ministry of Home Affairs, GOI, on this issue. Some of the clarifications/conditions specified by the GOI in its letters above are extracted as under:

- Foreign nationals coming to India for executing projects/contracts in India will henceforth have to come only on employment visas.
- All foreign nationals currently in India on business visas (BV) and engaged in project or contract work should return to their home countries on expiry of their visas or by 31st October 2009 whichever is earlier. No visa extension will be granted in such cases.
- Foreign nationals have to obtain Employment Visas (EV) only from their country of citizenship in order to come to India to work on projects/ contracts.
- Employment visa to be issued in strict conformity with the Employment Visa Manual adhering to the listed guidelines:
- Employment visa to be granted to skilled or qualified professional; or to a person engaged or appointed by a company /organisation on contractor on employment basis at a senior level or skilled position such as technical expert /senior executive or in a managerial position etc. Employment visa not to be issued for routine, ordinary or secretarial/clerical jobs.
- Indian company engaging foreign nationals for executing projects /contracts in India shall be responsible for their conduct as well as departure from India.
- Ministry of External Affairs (MEA) will advise the Indian missions located in neighbouring countries not to grant BV's to the foreign nationals who come to India for execution of projects/contracts.

Issuance of Employment visa to Chinese nationals

- Applications for EV to the Indian Mission in China by the Indian / Chinese company has to be submitted incorporating the following additional information:
- Educational qualifications and the current job, and
- Nature of job proposed to be performed in India



- Indian /Chinese company is also required to forward the copy of the visa application to Ministry of Home Affairs (MHA) (Foreigners Division)
- Indian Mission is also required to send the information so received to MHA (FD). Visa has to be processed by MHA within a period of 60 days.
- MHA on receiving the information / application forwards the same to the following two parties:
 - Intelligence Bureau (IB) and IB to give clearance within 15 days
 - Ministry of Labour (MOL): MOL to give clearance within 45 days
- MEA as a point of caution will also collate details of Chinese nationals on projects in India since 1st January 2008 on BV from the Indian Missions in China. This shall be provided to IB.

31. The guidelines for granting employment visas by Ministry of Labour & Employment, GOI, stipulates that employment visa for foreign personnel coming to India for execution of contracts may be granted by Indian missions to highly skilled and professionals to the extent of 1% of total persons on the project or maximum of 40 persons for each power project.

32. The petitioner has submitted that with the implementation of the new visa policy and the restriction on the maximum number of foreign nationals to be deployed by SEPCO, the number of experienced personnel deployed by SEPCO at the Project site was reduced drastically from the original estimates and the balance workforce had to be sourced/sub-contracted from India. The comparison between the scheduled deployment and actual deployment of workforce as submitted by the petitioner is as under:

Year	Scheduled Deployment of manpower	Re-worked Scheduled Deployment of Manpower	Actual Deployment of Manpower
2009	1100	138	14
2010	3950	517	61
2011	4250	577	132
2012	1000	419	190

33. The petitioner has submitted that the scheduled deployment of manpower as above is as per the bid submitted by SEPCO which form part of the EPC contract. The petitioner has also submitted that it had negotiated with SEPCO in order to reduce the number of foreign nationals proposed to be deployed by SEPCO at the Project site and had accordingly re-worked the



scheduled deployment of manpower. It has stated that it is evident from the above table that not even 20% of the reworked schedule could be deployed. The petitioner has further submitted that had there been no delay on account of change in visa policy, the project could have been commissioned by 11.12.2012 considering the period of 34 months from the actual land acquisition date of 11.2.2010. The respondent, GRIDCO has submitted that the circular dated 20.8.2009 is only a clarification on the issue that the foreign nationals coming for execution of the project will have to come under the Employment Visa and not under Business Visa. It has also stated that the O.M dated 8.9.2009 is applicable only for public sector undertaking.

34. We have examined the submission of the petitioner that the absence of sufficient number of experts from OEM, who are Chinese nationals, during the peak project construction activities has had a direct impact on the progress of the project (as the erection and commissioning of BTG was supplied by SEPCO) leading to the delay in the completion of the project. Similar issue was raised by Udupi Power Corporation Ltd (UPCL) in the tariff Petition No.160/GT/2012 filed before the Commission and the Commission after examining the relevant Circular/Memo of the GOI relating to the change in Visa Policy, had condoned the delay of 6 months by order dated 20.2.2014 and had accordingly granted relief to the petitioner. On Appeal, the Tribunal by judgment dated 15.5.2015 modified the said order and had allowed condonation of delay of only three months, on the ground that the requisite personnel was made available to the UPCL project by February, 2010. The relevant portion of the order is extracted as under:

“76..... Further, employment visa was to be granted to skilled or qualified professionals such as technical experts/technicians and not for routine, ordinary or secretarial/clerical jobs. The Ministry of Home Affairs also gave timeline for clearance by Intelligence Bureau within 15 days and Ministry of Labour within 45 days. All other directions were general directions. Ministry of Labour & Employment guidelines for granting employment visa stipulate granting of visa to the extent of 1% of total persons on the project or maximum 40 persons for each power project. Udupi Power has stated that in November, 2009, only 4 experts were issued visas and gradually number was increased to 12 in December 2009, 30 in January, 2009 and 45 in February 2010 and required number of 65 experts were present during May, 2010 to recommence the work. We, therefore, feel that delay of 3 months due to difficulties in the months from November, 2009 to January, 2010 only be allowed as by February 2010, 45 persons, which is as per the guidelines of the Ministry of Labour were available at the project.”



35. As stated in the table under para31 above, against the original scheduled deployment of manpower, the petitioner had negotiated with the EPC contractor for reduction in the foreign nationals proposed to be deployed and accordingly the minimum manpower required to be deployed had been worked out. However, pursuant to the change in the Visa Policy, the actual deployment of manpower was far less than the original /revised manpower scheduled to be deployed in the Project. We are however not convinced with the submissions of the petitioner that the delay is on account of the reduction in the actual deployment of manpower due to change in Visa Policy. In our view, the finding of the Tribunal in the case of UPCL on this issue is relevant to the present case. As in the case of UPCL, the main plant supplier in the project of the petitioner is a Chinese EPC contractor. As regards the deployment of man power in terms of the guidelines of the Ministry of Labour, it is noticed that as against the original manpower requirement of 65 nos in 2009, the manpower had gradually increased to 45 nos in February, 2010 in the case of UPCL. In the present case, the actual manpower deployment had increased from 14 nos in 2009 to 61 nos in 2010. Thus, the required number of experts were available to the petitioner during 2010 in terms of the guidelines of the GOI. Moreover, the petitioner/ EPC contractor had the option of availing the services of skilled manpower available in India due to the reduction in the manpower in order to complete the said work. as the fact that the restrictions in the number of Chinese Experts as per the new Visa Policy was known to the petitioner even before the start of the project work in February, 2010. Under these circumstances, due to Govt. of India Visa Policy changes, the petitioner ought to have taken pre-emptive measures in consultation with the EPC contractor to source the remaining skilled experts from India in order to minimise the effect on the scheduled project completion period. In the above background, we do not find it justifiable to allow the total period of delay of 10 months for Unit-I, 11 months for Unit-II and 13 months for Unit-III, due to Chinese Visa Policy. However, considering the fact that the Change in Visa Policy had caused some initial hiccups in the reorganisation/remobilisation/rescheduling of man power resources after acquiring the land for the project in February, 2010, the total delay of 3 months only is condoned and allowed



considering the difficulties faced by the petitioner for the period from 11.2.2010 to 10.5.2010, as against the claim of petitioner for 10 months in Unit-I, 11 months in Unit-II and 13 months in case of Unit-III. In our view, the delay for the said period of three months for the reasons stated is not attributable to the petitioner and is beyond the control of the petitioner. Accordingly, in terms of the principles laid down by the Tribunal in the judgment dated 27.4.2011 [(situation (ii))], the total delay of 3 months is condoned and the generating company is given the benefit of the additional cost incurred due to time overrun. However, the LD recovered from the contractor and the insurance proceeds, if any, would be considered for reduction of capital cost.

Delay for permission to conduct COD post synchronization of Unit-II due to high hydro conditions and grid constraints limiting evacuation to 350 MW only

Submission of the petitioner

36. The petitioner vide affidavits dated 5.3.2013 and 31.7.2014 has submitted as under:

(a) Unit-II achieved synchronization in July, 2013. Subsequently, GKEL requested GRIDCO on numerous occasions to allow the unit to carry out the commissioning test. However, due to the surplus hydro power availability in the Odisha grid during the period from July, to November, GRIDCO was not inclined to accept costly thermal power in lieu of cheaper hydro power. Hence GRIDCO did not allow GKEL to carry out the 72 hours MCR test required for declaration of commercial operation ("COD") of Unit-II. The cyclone impacting Odisha in September, 2013 also led to reduction in demand and consequently led to a surplus power situation in the state.

(b) On 26.9.1012, a meeting was held between Power grid Corporation of India Ltd. ("PGCIL") and various power project developers with projects located in Orissa and commissioning dates within the years 2013 and 2014, to discuss status of the evacuation facility from Orissa into the Northern Region. It was informed by PGCIL that the construction of 765 kV Jharsuguda-Dharamjaygadh D/C line is being delayed due to objections of coal mine developers for construction of transmission lines through their coal blocks. Further, the Ministry of Coal directed PGCIL to divert the route of the transmission line in order to avoid the coal blocks. The rerouting would require obtaining fresh forest clearance. PGCIL would try to obtain the clearance between December, 2013 to March,2014 and complete the project by May, 2014. As per PGCIL, this was a force majeure situation.

(c) Bulk Power Transmission Agreement ("BPTA") executed between PGCIL and GKEL dated 24.2.2010 provided for an interim arrangement of power evacuation through a Line in Line out (LILO) arrangement on Short Term Open Access ("STOA") basis till Long Term Open Access was made available. This was the premise for the Petitioner's assumption of commissioning of Unit III in August 2013.

(d) Unit III was ready for synchronization in November, 2013 itself. However, because of non-availability of sufficient evacuation facilities between Odisha and Haryana, Unit III



could not be synchronized and commissioned. Moreover, in the said situation, commissioning of Unit III would have required backing down of Unit I and Unit II.

(e) It is further submitted that OPTCL had only permitted a load of 350 MW on the LILO system and hence either only one unit could be operated or Unit I or Unit II could be operated at 50% capacity. Finally the COD of Unit III was achieved on 25.3.2014 after carrying out full load testing from 21.3.2014 to 24.3.2014, after shutting down Unit I and Unit II, due to restriction imposed by OPTCL.

(f) The details of correspondences between GKEL, GRIDCO and OPTCL as under:

Sl. No.	Particulars	Permission for COD		Duration in days	Remarks
		Applied	Obtained		
1	Unit-I	1.2.2013	18.2.2013	18	30 days of consequential delay
2	Unit-II	27.7.2013	7.11.2013	104	High Hydro conditions, Grid constraints.
3	Unit-III	11.11.2013	7.3.2014	115	Grid restriction by OPTCL to evacuate only 350 MW

37. Accordingly, the petitioner has justified the delay in the commissioning of the project leading to time and cost overrun on account of the above events and has submitted that the same is not attributable to it and may accordingly be allowed.

Analysis and Decision

38. We have examined the matter. From the documents furnished by the petitioner, it is noticed that the permission for synchronization of Unit-II was accorded by OPTCL on 4.7.2013 and accordingly Unit-II was synchronized on 9.7.2013. As per terms of the Bulk Power Transmission Agreement (BPTA) entered between the petitioner and PGCIL, the pooling station and transmission lines were required to evacuate 800 MW capacity as per the commissioning schedule of the power plant of the petitioner. However, due to construction related issues, there was delay expected in the completion of the transmission line. Hence, PGCIL provided the petitioner an interim arrangement of LILO of one circuit of Talcher-Meramundali 400kV D/C line. Under this interim arrangement, the petitioner could not inject more than 350 MW and this fact was communicated by M/s. OPTCL vide on 4.7.2013. Unit-II was first synchronized with the grid on 9.7.2013 and applied to OPTCL /SLDC on 27.7.2013 for permission for COD. The permission of OPTCL/SLDC for COD was received on 7.11.2013 and COD of Unit-II was



achieved only on 12.11.2013. PGCIL has also considered its inability to provide the power evacuation facility of the petitioner as a Force Majeure constraint as per the Minutes of Meeting. In the background of the events and discussions, it is evident that the delay of 3.5 months (from 27.7.2013 to 7.11.2013) in the COD of Unit-II is on account of grid constraints and the petitioner cannot be held responsible for the same.

39. It is further noticed that due to capacity constraints in the OPTCL transmission system, the petitioner was not provided access for connecting the generation units to the grid. Unit-III, which was otherwise ready for synchronization in November, 2013 with the grid to achieve COD in the month of January, 2014, had received grid clearance only during March, 2014. The petitioner applied for grid connection on 11.11.2013 and the permission was obtained on 7.3.2014. Accordingly, the petitioner could declare the COD of Unit-III under commercial operation only on 24.3.2014. Thus, there was delay of 4 months (11.11.2013 to 7.3.2014) in getting the grid clearance for Unit-III. Moreover, as PGCIL pooling station including 765 kV Jharsuguda - Dharamjaygadh D/C line were still not available, the operation of the plant was restricted to 350 MW only. In the background of the events and discussions, it is evident that the delay of 4 months in the COD of Unit-III is on account of grid restrictions by OPTCL for which the petitioner cannot be held responsible. In view of the above, we conclude that the delay due to grid restrictions/evacuation constraints were beyond the control of the petitioner and the petitioner cannot be made attributable for the same. Accordingly, in terms of the principles laid down by the Tribunal in the judgment dated 27.4.2011 [(situation (ii))], the total delay of 7.5 months (3.5 months for COD of Unit-II and 4 months for COD of Unit-III) is condoned and the generating company is given the benefit of the additional cost incurred due to time overrun. However, the LD recovered from the contractor and the insurance proceeds, if any, would be considered for reduction of capital cost.

40. To summarise, the time overrun of 3 months due to Chinese Visa Policy in case of Unit-I, Unit-II and Unit-III from 11.2.2010 to 10.5.2010 have been condoned as the same is found to be



beyond the control of the petitioner. Further, the time overrun of 3.5 months (from 27.7.2013 to 7.11.2013) in case of Unit-II and 4 months (from 11.11.2013 to 7.3.2014) in case of Unit-III due to delay in allowing grid access by OPTCL/ SLDC have also been allowed as these delays were beyond the control of the petitioner. The balance period of delay on account of other reasons furnished by the petitioner is not found to be beyond the control of the petitioner and hence not allowed.

41. Based on the above discussions, the time overrun allowed (against the actual time overrun) for Unit-I, Unit-II and Unit-III and the schedule COD (reset) for the purpose of computation IDC is summarized as under:

Units	Schedule COD as per LOA	Revised scheduled COD	Time overrun allowed (in months)	Time overrun disallowed (in months)
I	27.11.2011	29.2.2012	3	14
II	27.1.2012	12.8.2012	6.5	15
II	27.3.2012	26.10.2012	7	17

Capital Cost

42. Regulation 7(1) of the 2009 Tariff Regulations, provides as under:

"The expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan- (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (i) being equal to the actual amount of loan in the event of the actual equal less than 30% of the funds deployed, up to the date of commercial operation of the project, as admitted by the Commission, after prudence check;

Capitalized initial spares subject of the ceiling rates specified in regulation 8; and

Additional capital expenditure determined under regulation 9:

Provided that the assets forming part of the project, but not in use shall be taken out of the capital cost.

The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff;

Provided that in case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out based on the benchmark norms to be specified by the Commission from time to time.



Approved Capital Cost

43. The Board of Directors of the Petitioner Company had approved the Project cost of ₹4540.00 crore on 8.4.2009. Thereafter, financial closure of the project was achieved on 27.5.2009 considering the total capital cost of ₹4540.00 crore. The Board of Directors of the Petitioner Company on 17.1.2013 had approved the Revised Cost Estimate of the project for ₹6307.00 crore, which was further revised to ₹6519.00 crore due to various delays in the project construction which was beyond the control of the petitioner. Based on the lenders appraisal, the revised cost of ₹6519.00 crore was approved by the lenders on 16.6.2014.

Actual Capital Cost as on COD

44. The petitioner vide affidavit dated 31.7.2014 has furnished the auditor certified capital cost as on COD of Unit-I, Unit-II and Unit-III/ generating station under:

	Actual capital expenditure as on COD of Unit-I (30.4.2013)	Actual capital expenditure as on COD of Unit-II (12.11.2013)	Actual capital expenditure as on COD of Unit-III/station (25.3.2014)
Capital cost excluding IDC, FC, FERV & Hedging Cost	224857	357630	536765
IDC, FC, FERV & Hedging Cost	33223	71497	94266
Other Cost			36.84
Capital cost including IDC, FC, FERV & Hedging Cost	258080	429127	634715

45. It is observed from the note of the Auditor Certificate dated 10.6.2014, that the capital cost as on COD of Unit-III includes an amount of ₹410.72 crore of Common assets relating to all units which was allocated under Unit-IV contract and has been put to use and capitalized during 2013-14. In our view, any capital expenditure under Unit-IV contract cannot be considered under the capital cost for Unit-I, II and III, as the capital cost for determination of tariff is for Units-I, II and III, comprising of 1050 MW (3 x 350 MW) only in this order.



46. Accordingly, the capital cost as per Auditor certificate, after excluding the cost of Unit-IV, works out as under:

	(₹ in lakh)		
	Actual capital expenditure as on COD of Unit-I as on 30.4.2013	Actual capital expenditure as on COD of Unit-II as on 12.11.2013	Actual capital expenditure as on COD of Unit-III/ station as on 25.3.2014
Capital cost excluding IDC FC, FERV & Hedging Cost	224857	357630	536765
IDC, FC, FERV & Hedging Cost	33223	71497	94266
Other Cost	0.00	0.00	3684
Capital cost including IDC, FC, FERV & Hedging Cost	258080	429127	634715
Less : Capital cost of Unit-IV	0.00	0.00	41072
Capital cost excluding cost of Unit-IV	258080	429127	593643

47. It is observed from the opening gross block as per books of accounts as on the respective COD of units and un-discharged liabilities that the capital cost derived is excluding un-discharged liabilities. In accordance with Regulation 7 of the 2009 Tariff Regulations, the capital cost as on COD shall include the expenditure incurred or projected to be incurred upto COD. The un-discharged liabilities shall not form a part of capital cost as on COD and accordingly, the capital cost, which excludes claim of un-discharged liabilities, has been considered. However, in order to verify the claim of un-discharged liabilities, which becomes payable as and when discharged by the petitioner, the petitioner is directed to furnish the balance sheet as on COD of each unit along with accompanying notes/ schedules (as relevant), asset wise/ party-wise details of the un-discharged liabilities as on COD, duly certified by Auditor and the same will be considered at the time of revision of tariff based on truing-up in accordance with Regulation 6(1) of the 2009 Tariff Regulations.



Increase in Project Cost

48. The increase in capital cost of the project as submitted by the petitioner vide affidavit dated 11.4.2014 is as under:

(₹ in crore)						
Sl. No	Project components	cost	As per petition	Revised Estimate as on 31.12.2013	Increase	Reasons
1	Land		93.55	97.00	3.45	Increase in land price due to delay in release of status quo order by High Court on DAR and MGR land
2	EPC		4020.76	4104.00	83.24	Foreign exchange rate variation
3	Taxes & Duties		285.60	143.00	(-) 142.60	Refund of Customs Duty
4	Non-EPC Costs		484.48	625.27	140.79	Additional items (transmission line to GRIDCO, railway feeder line)
5	Pre-operating costs		495.95	518.50	22.55	Reduced infirm power generation due to coal shortage
6	IDC & Finance cost		782.90	820.00	37.10	Delay in completion of construction
7	Working Capital Margin		43.90	112.50	68.60	Increase in working capital limit
8	Contingency		0.00	0.00	0.00	-
9	Additional Spares		100.00	100.00	0.00	-
10	Grand Total		6307.14	6520.27	213.13	-

49. The petitioner was directed to confirm as to whether the project cost includes evacuation system cost from station switchyard to nearest pooling station of GRIDCO along with the reasons for the change in cost estimate. In response, the petitioner vide affidavit dated 31.7.2014 has submitted that at the time of filing the petition (April, 2013) the estimated project cost was given as ₹6207.00 crore and due to intervening events, the project cost was increased to ₹6520.27 crore. The petitioner has further submitted that based on lenders appraisal, the lenders approved a cost of ₹6519.00 crore on 16.6.2014. The details of the project cost as approved by the Board of the Petitioner Company, as submitted by the petitioner are as under:



(₹ in crore)

Sl.No	Head	Project cost as per petition	Project cost submitted vide affidavit dated 11.4.2014	Increase
1	Land	94	97	3
2	EPC	4021	4103	82
3	Taxes & Duties	286	143	(-)143
4	Non EPC	484	625	141
5	Pre-operative expenses	496	518	22
6	IDC & FC	783	820	37
7	Margin money	44	113	69
	Total cost submitted by petitioner	6207	6419	212
	Spares (additional capitalization)	100	100	0
	Total Cost as approved by Board of Petitioner Company	6307	6519	212

50. The petitioner has further submitted that the project cost includes the evacuation system cost from station switchyard to nearest pooling station of GRIDCO. The reasons for the change in Project cost as submitted by the petitioner is as under:

(₹ in crore)

	Head	Increase	Reasons for increase/decrease
1	Land	3	Increase in total land cost due to further delay in vacating stay order by High Court related to the land required for MGR and direct approach road and on account of purchase of additional land.
2	EPC	82	Due to further delay in commissioning of unit 2 and unit 3 and during such delay period there was a steep depreciation of Rupee against the dollar from ₹54/- to ₹68/- therefore the offshore component of EPC component has increased.
3	Taxes and Duties	(-)143	Due to refund of Customs Duty ₹139.64 crore and balance amount is due to savings accrued from the estimated tax liability.
4	Non-EPC cost	141	The non-EPC costs have increased primarily on account of the cost for construction dedicated transmission line to OPTCL substation along with associated bays which is being constructed under the insistence of GRIDCO and OPTCL. Estimated cost of construction transmission line is ₹64 crore Indian Railway authorities require GKEL to share 50% of the railway feeder line from Talcher coalfields area till the mainline. Estimated cost is ₹77 crore
5	Pre-Operative expenses	22	Due to shortage of linkage coal, the GKEL could only produce 50% of infirm power generation projected in the petition. As against proposed sale of 406.422 units @ ₹1.52 per unit leading to a revenue of ₹61.94 crore, the GKEL was



			able to generate 72.15 MUs from Unit-1 billed @ ₹1.75 per unit. Accordingly, Billed amount of ₹42.30 Cr has been capitalized against actual receipt of ₹38.38 Cr. Due to delay in the Project, GKEL has incurred expenses towards salaries, professional & consultancy charges and start-up costs (power, fuel oil etc.)
6	IDC & FC	37	Delay in commissioning of individual units and increase in period for bearing interest burden. The reasons for delay in commissioning have been set out above.
7	Working Capital Margin Money	69	The GKEL requested the bankers to increase the working capital limit to cover the expected increase in operating costs on account of coal price increase and delay in receivables due to revision of tariff and determination of tariff under long term PPA. The sanction limit now is ₹450 crore of which the GKEL has considered 25%, i.e., ₹112.50 crore as working capital margin money.

51. As regards the price escalation in EPC/Non-EPC contracts, the petitioner vide affidavit dated 31.7.2014 has submitted that as EPC contracts were negotiated on fixed and firm basis, there is no price escalation in the EPC contract beyond the contract price agreed in the contract. It has also submitted that all Non-EPC contracts (except for transmission line contract and LILO connection contract) were negotiated on fixed and firm basis and there is no price escalation in the Non-EPC contract, beyond the contract price agreed under the contracts.

52. However, due to disallowance of time overrun of 14 months, 15.5 months and 17 months in case of Unit-I, Unit-II & Unit-III respectively, the overhead expenses in establishments such as salary, transportation, etc., require a pro-rata reduction in cost for the period of 14 months as on COD of Unit-I, 15.5 months as on COD of Unit-II and 17 months as on COD of Unit-III/station. The establishment cost as on COD of Unit-I is ₹157.16 crore, ₹258.28 crore as on COD of Unit-II and ₹367.74 crore as on COD of Unit-III. Thus, the *pro rata* deduction in overhead expenses due to delay of 14 months, 15.5 months and 17 months in the COD of Unit-I, Unit-II and Unit-III are worked out as follows :

	Total period taken from zero date to actual COD (months)	Time overrun disallowed (months)	Overhead Expenses (₹ in crore)	Pro-rata reduction = (col.4x col.3)/col.2 (₹ in crore)
(1)	(2)	(3)	(4)	(5)
Unit-I	47	14	157.16	46.81



Unit-II	47.5	15.5	258.28	84.28
Unit-III	51	17	367.74	122.58

53. The submissions have been considered and the item-wise increase in the Audited capital cost as compared to the original project cost is examined and considered as under:

Particulars	Original Estimate	Audited capital cost as on COD of Unit-III/station (24.3.2014)	Variation with respect to Audited capital cost	Commission's observations	(₹ in crore)	
					Increase in cost allowed up to COD of Unit-III as capitalized and Certified by Auditor	Total Capitalization allowed as on COD of Unit-III/station (24.3.2014)
Land	73.00	101.36	28.36	The original appraised cost of land was ₹73.00 crore. The actual expenditure on acquisition of the Project land is ₹101.36 crore as on the COD of Unit-III. Therefore there has been an increase of ₹28.36 crore in the cost of land. The land cost of ₹101.36 crore is based on the actual payment made to IDCO. The petitioner has submitted the date/year-wise payment made to IDCO. Based on the details of the actual expenditure incurred, the increase of ₹28.36 crore towards the Land cost has been admitted.	28.36	101.36
EPC	3681.00 (Including taxes & duties of ₹63.00 crore)	4129.66 (4540.38-410.72)	448.66	The breakup of original EPC cost is as follows: Civil Works: ₹1265 crore. Original EPC cost: ₹2353 crore (excluding civil works). Taxes & duties ₹63 crore. Total EPC cost is ₹3681 crore. The audited EPC cost as on COD of Unit-III/station including taxes duties but excluding cost of Unit-IV (₹410.72crore) is ₹4129.66 crore The increase of ₹448.66 crore (4129.66-3681) in EPC cost is due to	448.66	4129.66



				<p>depreciation of Indian Rupee which caused a greater cash outflow due to delay in the actual COD as compared to the scheduled COD. The exchange rate was ₹40.00 during bid submission in November, 2007 and was revised to ₹60.00 as on July, 2014.</p> <p>The EPC contract (offshore supplies) was signed in May, 2009 for CNY 3151 million. (Page 684, Annex-5, Vol.2/4) which was equal to ₹2192. The Off shore cost was first re-appraised in June, 2012 and there was over-run of ₹83 crore. There was overrun of INR 413 crore in the last appraisal in Nov, 2013. Thus, the off-shore component of EPC was revised to INR 2688. However, the on-shore component of INR 160 at the time of original estimate has been reduced to INR150. Thus, the EPC cost has been revised to ₹2839 crore. In the revised estimate in November, 2013 as against the original estimate of ₹2353 crore. Thus, there is an increase of ₹486 crore as per revised estimate. The reasons for time overrun have been found to be beyond the control of the petitioner. Accordingly, the variation in exchange rate has resulted in the increase in EPC cost and the same is allowed.</p>		
Non-EPC cost	99.00	360.93	261.93	<p>The Non-EPC costs had increased by ₹261.93 crore as per the audited capital cost. However, the petitioner has claimed ₹217.85 crore on account of various change-in-law events.</p> <p>Increase in Non-EPC cost is due to change in scope of work such as :</p>	161.12	260.12



6 Addition of Wagon tippler to receive imported coal as the NCDP led to reduction in assured quantity of coal = ₹46.05 crore.

6 Increase in MGR cost by ₹54.49 crore (79.99-25.50) as compared to the financial stage

6 Coal Blending System required for procuring imported coal = ₹23.74 crore

(iv) Deposit towards alignment of canal (lining of irrigation canal-raw-water reservoir) = ₹36.84 crore.

v) The change of evacuation point at Angul instead of Meramundali amounting to ₹73.34 crore- This has not been considered since the same is not claimed **as on COD or as on 31.3.2014.**

The total increase in Non-EPC cost of ₹161.12 crore is due to:

Increase in (i) MGR cost, (ii) new scope of work of Wagon Tippler which has been required due to introduction of New Coal Distribution Policy (NCDP) under which there was reduction in the coal quantity from 100% of the normative requirement to 65% of the annual contracted quantity from CIL, Coal blending system, and increase in the transmission line cost of the project at various stages from bidding stage to final revised estimate stage.

As per audited cost the increase under the above heads is ₹161.12 crore as on COD and the same is allowed. However, the



				transmission line cost which is not claimed in the capital cost as on COD of Unit-III/station will be considered in the next tariff period (2014-19) and accordingly the increase on this count is not considered in this order.		
Pre-operative expenses	156.00	517.17	361.17	<p>The pre-operative expenses as per the original Project cost is ₹156 crore. The pre-operating costs has increased by ₹361.17 crore as on COD as compared to the original estimate. This increase is due to Commissioning & Start up fuel cost of ₹149.43 crore and Overhead expenses (establishment, admin, etc.) of ₹367.74 crore claimed under the above heads. The Startup-fuel cost is higher due to the reduced availability of linkage coal which led to increased procurement of coal from open market ,e-auction. Further oil consumption which was assumed to be used in minimum had to be increased due higher dependence on oil while revenue earned through infirm power was reduced.</p> <p>Pre-operative expenses claimed for ₹517.17 crore appears to be on higher side. However it is observed that in case of other contemporary projects like Mauda STPS and Vidhyachal STPS-Stage-IV, the Start-up fuel cost for 2x500 MW units under similar shortage of linkage coal and higher oil cost with less revenue earned from sale of infirm power had led to higher start-up costs of ₹144 crore and Overhead expenses of ₹364 crore, in case of Mauda STPS and ₹245 crore in case of Vindhyachal STPS</p>	238.59 (361.17 - 122.58) [Prorata reduction due to time overrun disallowed]	394.59



				Extension project. However, the establishment expenses has been reduced on pro rate basis for time overrun disallowed.		
Initial spares	0.0	0.0	0.0	It is submitted that the Initial spares of ₹100 crore has been proposed to be capitalized after 31.3.2014 as additional capital expenditure. There is no actual expenditure on initial spares as per audited capital cost. Hence not considered during this tariff period.	0.00	0.00
Total Hard Cost	4009.00	5109.12	1100.12		876.73	4885.73
IDC & Financing	431.00	827.32	396.32	The amount capitalized up to the COD of Unit-III as per audited capital cost. IDC based on actual COD has been allowed as time overrun has been found to be beyond the control of the petitioner and condoned.	396.32	827.32
Taxes & Duties	0.00	0.0	0.00	Included in EPC cost as per audited cost and hence not considered.	0.00	0.00
Total Cost incl. IDC & Financing charges, but excluding Margin money + Contingency cost	4440.00	5936.44	1418.44		1273.05	5713.05

54. Based on the above discussions, the Capital cost as on COD of Unit-I, Unit-II and Unit-III /Station found justified on prudence check, based on the audited capital cost, is summarized as under:

(₹ in lakh)

Description	Actual capital expenditure as on COD of Unit-I 30.4.2013	Actual capital expenditure as on COD of Unit-II 12.11.2013	Actual capital expenditure as on COD of Unit-III/Station 25.3.2014
Land cost	4399.00	4399.00	10136.00
EPC cost with taxes & duties	195662.00	310768.00	412966.00
Non- EPC Costs	7446.00	21236.00	26012.00
Pre-operating costs	15324.00	26676.00	39459.00



(after pro-rata deduction due to time overrun)	(20005.00-4681.00)	(35104.00-8428.00)	(51717.00-12258)
IDC & FC	30567.00	57620.00	82732.00
Capital Cost including IDC & FC	253398.00	420699.00	571305.00

Reasonableness of Capital Cost

55. In order to assess the reasonability of the capital cost for determination of tariff on cost plus basis, the capital cost of this Project has been compared with other projects of similar capacity viz., 300 MW and 500 MW size, which have been commissioned in recent past and within the previous span of 4-5 years. The comparative statement is as under:

Sl. No	Plant Name	Commercial Operation Date (COD)	Capital Cost in	Capacity in MW	(₹ in crore)
					Capital Cost (in ₹ crore/ MW)
1	Reliance Rosa (Unit 1 & 2)	30.6.2010	3112.81	2 x 300	5.31
2.	Sagardighi (Unit 2 & 3)	6.11.2008	2672.25	2 x 300	4.45
3.	Mauda STPS	30.3.2014	5521.37	2 x 500	5.52
4.	Indira Gandhi Jhajjar STPS (Unit 1to 3)	26.4.2013	7361.24	3 x 500	4.90
5.	GMR- Kamalanga (this project)	24.3.2014	5936.43	3 x 350	5.56
6.	UdupiPCL	18.2.2012	5344.76	2x600	4.45

56. It is observed that the overall project cost of this Project of the petitioner is ₹5.56 crore/MW and the same is comparable to other similar unit size Project namely Reliance Rosa with a capital cost of ₹5.31 crore/MW which was commissioned during the year 2010 as against this Project of the petitioner which was commissioned during the year 2014. The capital cost of ₹3112.81 crore in respect of the Reliance Rosa Project up to cut-off date (31.3.2012) is as per the UP State Regulatory Commission's order dated 28.3.2011 in Petition No. 706/2010. The capital cost of this Project of the petitioner is also comparable to other contemporary project namely Mauda STPS of NTPC with a capacity of 500 MW. However, the capital cost of this Project of the petitioner is higher by 24% $\{(5.56-4.45)*100/4.45\}$ than the Sagardighi Project (2 x 300 MW) with a similar capacity commissioned in November 2008 and Udupi Project based on imported coal in Karnataka commissioned in February 2012.



57. The Hard cost of the Project of the petitioner as on COD of the generating station is ₹4885.73crore. Accordingly, the hard cost per MW works out to ₹4.65 crore/MW (4885.73/1050).The hard cost of ₹4.65 crore/ MW includes cost of MGR as well as wagon Tripler and transmission line cost upto tie line. This hard cost however includes increase in EPC cost due to FERV of ₹448.66 crore up to 25.3.2014. Excluding this increase, the hard cost works out as ₹4437.07 crore which works out as ₹4.22 crore/MW. No bench mark capital cost for 350 MW size units based on coal/ lignite fired has been specified by the Commission. However, the bench mark capital cost (Hard cost) for 500 MW unit size for a Green Field Project is ₹5.08 for the first unit, ₹4.71 crore/MW for the second unit and ₹4.48 crore /MW for the third unit. The hard cost of the project is comparable to the benchmark hard cost of 500 MW considering the fact that the benchmark hard cost does not include cost of MGR system and transmission line upto tie point etc. The hard cost of UPCL project allowed by the Commission in order dated 10.7.2015 in Petition No 160/GT/ 2012 is ₹4289.986 crore including FERV of ₹54.056 crore which works out to 3.57 crore/MW. The BTG Package in both the cases were supplied by Chinese Companies. The EPC package in case of UPCL was finalised in December, 2006, whereas the EPC Package of this project of the petitioner was finalised in August, 2008.The difference in hard cost of the project of the petitioner and the UPCL project could be attributed to the difference in exchange rates during 2006 and 2008 and due to high pre-operative expenses in case of the project of the petitioner. Since the EPC package was decided for the project through a process of ICB and the cost of project is comparable to 500 MW projects despite unit size being lower and without any advantage of economy of scale, the hard cost of ₹4437.07 crore excluding FERV increase is considered reasonable.

Initial Spares

58. The petitioner has submitted that initial spares amounting to ₹10000 lakh is proposed to be capitalized after 31.3.2014 as additional capital expenditure. It is noticed that there is no actual expenditure incurred on initial spares as on COD of the generating station as per audited



capital cost. Hence, expenditure on initial spares has not been considered during this tariff period.

Sale of infirm power

59. The petitioner vide affidavit dated 31.7.2014 has furnished the details of the revenue earned from the sale on infirm power from the three units along with the cost of fuel incurred for generation of infirm power as under:

	<i>(₹ in lakh)</i>		
	Unit-I	Unit-II	Unit-III
Revenue from sale of Infirm Power	1237.49	1956.43	644.19
Total Fuel Cost	4079.46	4497.97	1249.64

60. The submissions of the petitioner have been examined and the differential amounts in positive have been adjusted in the capital cost.

Interest During Construction

61. The petitioner was directed to furnish the details of IDC and in response, the petitioner vide affidavit dated 31.7.2014 has submitted that under the financing arrangement entered into by the petitioner it was required to pay IDC for the period prior to the COD of the respective units and the projector as the case may be. It has also submitted that IDC is paid on the loans raised by a company till the respective units are achieved commercial operation, for which loan has been taken. The crucial factors that have caused the increased in IDC as taken by the petitioner are as under.

- a. The increase in capital cost in Rupee terms on account of the devaluation of the Indian Rupee which caused a greater cash outflow on account of increase in the EPC cost. EPC cost has increased due to abnormal, unprecedented and uncontrollable depreciation of Rupee because of delays;
- b. The delays in project completion on account of land acquisition issues and changes in visa policy, Labour exodus due to industrial labour unrest, delay due to imposition of restriction on plying of vehicle during the day time, transmission line which have significantly extended the construction period, thereby leading to increased IDC;
- c. Major delays in construction activity of Merry Go Round system, Direct Approach Road which are the only link through which coal can be brought to the plant and the same operated on a continuous and commercial basis.



- d. Delay in allowing grid access to achieve COD for Unit-I, Unit-II, Unit-III. This had subsequent bearing achieving the commercial operation of the units. SLDC/OPTCL had also imposed the evacuation restriction to 350 MW using the existing Transmission system. The delay in construction of transmission line from the plant boundary to PGCIL pooling station.

62. Accordingly, the petitioner has submitted that as a result of the aforesaid factors, the IDC has increased from ₹431 crore to ₹820 crore. It has also stated that the increase in IDC was on account of unforeseeable, unprecedented and uncontrollable factors which could not have been controlled by the petitioner.

63. The IDC amount claimed by the petitioner is as under:

<i>(₹ in lakh)</i>		
As on COD of Unit-I 30.4.2013	As on COD of Unit-II 12.11.2013	As on COD of Unit-III 25.3.2014
26223.33	50424.43	70317.64

64. The IDC has been worked out based on the bank-wise loan details and the interest rates as per the loan agreement submitted by the petitioner. The revised scheduled CODs considered for the purpose of IDC computation is as under:

Units	Schedule COD as per LOA	Actual COD	Revised scheduled COD
I	27.11.2011	30.4.2013	29.2.2012
II	27.1.2012	12.11.2013	12.8.2012
II	27.3.2012	25.3.2014	26.10.2012

65. Accordingly, the unit-wise IDC allowed for capitalisation as on the COD (revised) is as under:

<i>(₹ in lakh)</i>		
As on COD of Unit-I (30.4.2013)	As on COD of Unit-II (12.11.2013)	As on COD of Unit-III (25.3.2014)
20196.00	34404.49	44831.34

66. The IDC allowed is subject to revision at the time of truing-up based on audited balance sheet as on the respective dates of COD of the units.



Liquidated Damages

67. The petitioner vide affidavit dated 31.7.2014 has submitted that as the PG test and reliability test are not completed, it is not possible to ascertain the liability towards Liquidated Damages (LD). It has also submitted that at present it is not envisaged that LD shall be recovered, however, if any LD is to be recovered in future, the petitioner will intimate to the Commission and the same may be taken up in truing-up. The submissions have been considered. The petitioner is directed to furnish the amount of LD recovered from the contractor, if any, at the time of revision of tariff based on truing-up exercise in terms of Regulation 6(1) of the 2009 Tariff Regulations for consideration of the Commission for adjustment in the capital cost.

Financial Charges

68. The financing charges claimed by the petitioner are as under:

<i>(₹ In lakh)</i>		
As on COD of Unit-I (30.4.2013)	As on COD of Unit-II (12.11.2013)	As on COD of Unit-III (25.3.2014)
4344.00	7196.00	12414.00

69. The petitioner has not furnished detailed calculations and breakup of the financial charges claimed, along with the supporting documents to substantiate the unit-wise allocation of the financing charges. In the absence of the same, financing charges have not been allowed as of now, as a conservative measure. However, the petitioner is granted liberty to submit the details of expenditure incurred towards the financing charges along with detailed breakup/ calculations, duly certified by Auditor, along with all supporting bank documents, including the basis of unit-wise allocation of the financing charges, at the time of revision of tariff based on truing-up exercise in terms of Regulation 6(1) of the 2009 Tariff Regulations.

Hedging Cost

70. It is observed from the Note in Form-4 of the petition, that the petitioner has exercised hedging against the payment in USD for foreign loans. However, in Form-5B of the petition, the



petitioner has indicated the expenditure as 'nil' towards hedging cost. In view of this, the expenditure towards cost of hedging has not been considered in the capital cost.

Foreign Exchange Rate Variation (FERV)

71. The petitioner has claimed FERV of ₹6999.27 lakh, ₹21072.16lakh and ₹23948.59lakh as on the respective date of COD of Unit-I, Unit-II and Unit-III respectively. However, the documents indicating the break-up and calculations of FERV have not been furnished by the petitioner. In the absence of the same, the extent of admissibility of FERV could not be worked out and hence as a conservative measure the same has not been considered. The petitioner is however granted liberty to furnish the detailed calculations of FERV, duly certified by Auditor, at the time of revision of tariff based on truing-up exercise in terms of Regulation 6(1) of the 2009 Tariff Regulations.

Capital Cost as on COD

72. Based on the above discussions, the capital cost as on COD considering the cost variation, capital liabilities, IDC, FC, FERV is summarized and allowed as under:

	<i>(₹ in lakh)</i>		
	Actual capital expenditure as on COD of Unit-I (30.4.2013)	Actual capital expenditure as on COD of Unit-II (12.11.2013)	Actual capital expenditure as on COD of Unit-III (25.3.2014)
Land cost	4399.00	4399.00	10136.00
EPC cost with taxes & duties	195662.00	310768.00	412966.00
Non- EPC Costs	7446.00	21236.00	26012.00
Pre-Operating costs	13006.00	14032.00	27768.00
FERV	-	-	-
IDC	20196.00	34404.49	44831.34
Financing Charges	-	-	-
Capital Cost including IDC, FC and FERV	240709.00	384839.49	521713.34

Additional Capital Expenditure

73. The petitioner has not claimed any additional capital expenditure from 24.3.2014 (COD of Unit-III) to 31.3.2014 and hence, the same has not been considered in this order.



Capital cost as on 31.3.2014

74. The capital cost as on COD of Unit-I till 31.3.2014 is allowed as under:

	(₹ in lakh)		
	Actual capital expenditure as on COD of Unit-I	Actual capital expenditure as on COD of Unit-II	Actual capital expenditure as on COD of Unit-III
Capital Cost (on cash basis) including IDC, & FERV	240709.00	384839.49	521713.34
Additional capital expenditure /Discharge of liabilities	0.00	0.00	0.00
Closing capital cost	240709.00	384839.49	521713.34

75. The capital cost allowed as above is subject to revision based on truing-up exercise in terms of Regulation 6(1) of the 2009 Tariff Regulations. The petitioner is directed to furnish the Audited balance sheets as on the COD of each units of the generating station.

Debt-Equity Ratio

76. Regulation 12 of the 2009 Tariff Regulations provides that:

“(a) For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan.

Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff.

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

Explanation.-The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.



77. The petitioner has claimed the debt-equity ratio as on COD based on the funds deployed for entire project as under:

	Amount (₹ in lakh)	Percentage
Equity	221200.00	36.07%
Debt	392020.34	63.93%
Total	613220.34	100.00%

78. The debt and the equity amount submitted by the petitioner are as under:

		(₹ in lakh)		
		30.4.2013	12.11.2013	25.3.2014
(A)	Funding			
	Actual Debt (Balance sheet)	341322.68	336665.62	392020.34
	Actual Equity (Share capital)	135637.40	159325.63	185275.63
	Total Fund deployed	476960.08	495991.25	577295.97
(B)	Capital Expenditure (Form 14)	530995.00	609200.00	641900.00

79. It is evident from the above that there is huge gap between the total fund deployed by the petitioner and the actual capital expenditure. As per balance sheet, reserve and surplus are negative and it is observed that the petitioner has deployed additional fund in the form of the share application money, borrowings from other sources and promoter's subordinate fund to bridge the gap of the capital requirements as detailed under:

(₹ in lakh)			
	As on COD of Unit-I	As on COD of Unit-II	As on COD of Unit-III
Share Application Money	13165.00	21900.00	12724.37
Borrowing from other sources	46755.94	44613.00	48821.00
Promoter's subordinate debt	24417.00	30817.00	34672.32
Total	84337.94	97330.00	96217.69

In absence of balance sheet as on COD, it is considered from nearest quarter end balance sheet i.e. balance sheet as on 31.3.13 for Unit I, balance sheet as on 30.9.13 for Unit II and balance sheet as on 31.3.14 for Unit III.

80. The petitioner has availed the fund as Share Application Money, Long term purpose of project. The petitioner has also considered it as a part of equity for the purpose of claiming Return on Equity. Since this amount is not a part of share holder's fund, but at the same time used for the project expenses, the question as to whether the Share Application Money, Long term borrowing from other parties and Promoter's subordinate debt used for the project expenses as part of equity for the purpose of tariff is to be allowed as part of equity is required



to be considered. This issue came up for consideration before the Commission in the tariff Petition No.199/GT/2013 (ONGC-Tripura Power Company Ltd v APDCL &ors) and the Commission by order dated 31.8.2015 rejected the prayer of the petitioner for considering the funds availed as part of equity and held as under:

“66. The petitioner has availed the fund as advance against equity and has utilized the same for the project. The petitioner has also considered the same as part of equity for the purpose of claiming return on equity (ROE). Since the petitioner has not converted this amount into equity, and has utilized the same for the project, the question as to whether the advance against equity used towards expenses of the project could be considered as part of equity for the purpose of tariff is required to be examined. We proceed to do so.

67.It is evident that the amount of `29296.10 lakh has been availed by the petitioner as advance from the shareholders. Since the amount is not converted into equity prior to its utilization, this advance amount could either be transferred to share capital or could be revoked/ rejected. It can be inferred that the advance against equity, pending allotment of shares can be refunded to the shareholders if they have not been allotted shares of the company. In this background, it could not be prudent for us to consider it as equity for the purpose of ROE.

68.Admittedly, the petitioner has utilized the advance against equity amount for the project. The funds deployed in the project are to be serviced either in the form of ROE or interest on loan and every fund deployed for the project has to be serviced. As stated above, the amount of advance against equity has not been allowed for the purpose of ROE. In order to safeguard the interest of consumers and to allow the recovery of reasonable cost to the petitioner as envisaged under Section 61 (d) of the Electricity Act, 2003 we follow a balanced approach. Accordingly, as the fund is deployed in the project by the petitioner, we consider the said amount of advance against equity as loan for the purpose of determination of tariff of the generating station.”

81. In line with the above decision, the prayer of the petitioner is rejected and the debt-equity ratio allowed as on the respective COD of the units has been arrived at based on the actual capital expenditure incurred, the actual debt incurred and the actual equity deployed as detailed under:

	<i>(₹ in lakh)</i>		
	As on COD of Unit I	As on COD of Unit II	As on COD of Unit III
Capital Expenditure (Form 14)	530995.00	609200.00	641900.00
Actual Equity (Share Capital)	135637.40	159325.63	185275.63
Equity (in Percentage)	25.54%	26.15%	28.86%
Debt (in Percentage)	74.46%	73.85%	71.14%

82. Debt has been worked out indirectly keeping the infused and reported equity in Balance sheet as constant since the share application money, subordinate debt fund and fund from other sources have been considered as loan. Equity has been worked out by considering the balance sheet of nearest quarter. The petitioner is directed to furnish the actual equity and the



debt deployed along with the supporting balance sheet as on the COD of respective units of the generating station.

Return on Equity

83. Regulation 15 of the 2009 Tariff Regulations, as amended on 21.6.2011, provides that:

“(1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% to be grossed up as per clause (3) of this regulation.

Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in Appendix-II.

Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be.

(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where t is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee, as the case may be, shall recover the shortfall or refund the excess Annual Fixed charges on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission:

Provided further that Annual Fixed Charge with respect to tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations.”

84. It is observed from the annual reports of the Petitioner Company for the year 2013-14 that there was no taxable income and hence no tax was payable for the year. As such, Return on Equity has not been allowed to be grossed up with the MAT rate as applied by the petitioner. Hence, the Return on Equity for the year 2013-14 has not been grossed up as no tax has been paid against the same. Accordingly, return on equity has been computed as under:



(₹ in lakh)

	30.4.2013 to 11.11.2013	12.11.2013 to 24.3.2014	25.3.2014 to 31.3.2014
Gross Notional Equity	61486.72	100648.05	150585.40
Additional Capitalisation	-	-	-
Closing Equity	61486.72	1,00648.05	150585.40
Average Equity	61486.72	100648.05	150585.40
Return on Equity (Base Rate)	15.500%	15.500%	15.500%
Tax rate (MAT)	0.000%	0.000%	0.000%
Rate of Return on Equity	15.500%	15.500%	15.500%
Return on Equity (annualised)	9530.44	15600.45	23340.74
Return on Equity (pro rata)	5117.72	5684.55	447.63

Interest on loan

85. Regulation 16 of the 2009 Tariff Regulations provides that:

“(1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.

(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year.

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project.

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered.

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.



(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute.

Provided that the beneficiary or the transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.

86. Interest on loan has been worked out as under:

i) The weighted average rate of interest has been calculated on the basis of average balance of actual individual loans such as 12.881%, 12.936% and 12.989% (annual) for each of the period, namely, from COD of Unit-I (30.4.2013) to 11.11.2013, COD of Unit-II (12.11.2013) to 24.3.2014 and COD of Unit-III (25.3.2014) to 31.3.2014 respectively. Accordingly, the same is considered for the calculation of interest of normative loan.

ii) The repayment for the period has been considered equal to the depreciation allowed for that period;

iii) The interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest. The calculation for weighted average rate of interest is enclosed as Annexure-I to this order.

87. The necessary calculation for interest on loan is as under:

	(₹ in lakh)		
	30.4.2013 to 11.11.2013	12.11.2013 to 24.3.2014	25.3.2014 to 31.3.2014
Gross Notional Loan	179222.28	284191.44	371127.94
Cumulative Repayment of Loan upto previous year	-	6399.35	13418.83
Net Opening Loan	179222.28	277792.08	357709.12
Additional capitalization	-	-	-
Repayment of Loan during the period	6399.35	7019.47	499.55
Net Closing Loan	172822.92	270772.61	357209.56
Average Loan	176022.60	274282.35	357459.34
Weighted Average Rate of Interest on Loan	12.881%	12.936%	12.989%
Interest on Loan (annualised)	22672.73	35480.84	46431.47
Interest on Loan (pro rata)	12174.95	12928.63	890.47

Depreciation

88. Regulation 17 of the 2009 Tariff Regulations provides as under:

“(1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.



(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.

Provided that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site.

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff.

(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III to these regulations for the assets of the generating station and transmission system.

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets.

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation including [Advance against Depreciation] as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.

(6) Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.”

89. The petitioner has submitted the weighted average rate of depreciation for the purpose of calculation of depreciation. The rate of depreciation rate has been worked out as 4.95%, 5.01% and 4.99% as on the respective COD of Units-I, II and III. Accordingly, depreciation has been calculated as given under:

	(₹ in lakh)		
	30.4.2013 to 11.11.2013	12.11.2013 to 24.3.2014	25.3.2014 to 31.3.2014
Opening Gross Block	240709.00	384839.49	521713.34
Addition capitalisation	-	-	-
Closing Gross Block	240709.00	384839.49	521713.34
Average Gross Block	240709.00	384839.49	521713.34
Freehold land	13.36	13.36	13.36
Gross block*	240695.64	384826.13	521699.98
Rate of Depreciation	4.95%	5.01%	4.99%
Depreciation (annualised)	11917.17	19263.96	26048.20
Depreciation (Pro rata)	6399.35	7019.47	499.55
Cumulative Depreciation	6399.35	13418.83	13918.38

* Cost of land included



Operation & Maintenance Expenses

90. The O&M Expenses norms for 350 MW units for coal based generating stations for 2013-14 in terms of the 2009 Tariff Regulations is ₹19.99 lakh /MW. O&M expenses claimed by the petitioner are as under:

(₹ in lakh)		
2013-14		
30.4.2013 to 31.3.2014	12.11.2013 to 31.3.2014	25.3.2014 to 31.3.2014
6997	13993	20990

91. The Operation & Maintenance expenses based on above norms is worked out and allowed as under:

	(₹ in lakh)		
	2013-14		
	30.4.2013 to 11.11.2013	12.11.2013 to 24.3.2014.	25.3.2014 to 31.3.2014
Annualised	6996.50	13993.00	20989.50
Pro rata	3757.02	5098.82	402.54

Interest on Working Capital

92. Regulation 18(1)(a) of the 2009 Tariff Regulations provides that the working capital for coal based generating stations shall cover:

- (i) Cost of coal for 1.5 months for pit-head generating stations and two months for non-pithead generating stations, for generation corresponding to the normative annual plant availability factor;
- (ii) Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor, and in case of use of more than one liquid fuel oil, cost of fuel oil stock for the main secondary fuel oil;
- (iii) Maintenance spares @ 20% of operation and maintenance expenses specified in regulation 19.
- (iv) Receivables equivalent to two months of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor; and
- (v) O&M expenses for one month.

93. Clause (3) of Regulation 18 of the 2009 Tariff Regulations as amended on 21.6.2011 provides as under:

"Rate of interest on working capital shall be on normative basis and shall be considered as follows:



(i) SBI short-term Prime Lending Rate as on 01.04.2009 or on 1st April of the year in which the generating station or unit thereof or the transmission system, as the case may be, is declared under commercial operation, whichever is later, for the unit or station whose date of commercial operation falls on or before 30.06.2010.

(ii) SBI Base Rate plus 350 basis points as on 01.07.2010 or as on 1st April of the year in which the generating station or a unit thereof or the transmission system, as the case may be, is declared under commercial operation, whichever is later, for the units or station whose date of commercial operation lies between the period 01.07.2010 to 31.03.2014.

Provided that in cases where tariff has already been determined on the date of issue of this notification, the above provisions shall be given effect to at the time of truing up.

94. Working capital has been calculated considering the following elements:

Fuel components in working capital

95. The petitioner has claimed following cost of Fuel in working capital:

	(₹ in lakh)		
	2013-14		
	30.4.2013 to 11.11.2013	12.11.2013 to 24.3.2014	25.3.2014 to 31.3.2014
Coal stock for 2 months	11361	23172	34802
Oil stock for 2 months	243	529	858

96. The petitioner vide affidavit dated 24.7.2013 had considered the GCV and price of coal for the preceding 3 months i.e December, 2011, January, 2012 and February, 2012 in case of Units-I, II and III which is not in accordance with the provisions of the 2009 Tariff Regulations. However, in compliance with the directions of the Commission, the petitioner has furnished the price and GCV of coal for the preceding 3 months from the COD of Unit-I, II and III. Accordingly, based on the weighted average GCV and price of fuel for the preceding three months from the COD of Unit-I (30.4.2013) from COD of Unit-II (12.11.2013) and from COD of Unit-III (25.3.2014), the fuel components in working capital for the period 2013-14 works out and allowed as under:

	(₹ in lakh)		
	2013-14		
	30.4.2013 to 11.11.2013	12.11.2013 to 24.3.2014	25.3.2014 to 31.3.2014
Coal stock for 2 months	10835.28	22240.77	36260.34
Oil stock for 2 months	242.67	529.12	858.04



Cost of Secondary Fuel Oil

97. The petitioner has claimed the cost of Secondary Fuel Oil in 2013-14 as under:

(₹ in lakh)

2013-14		
30.4.2013 to 11.11.2013	12.11.2013 to 24.3.2014	25.3.2014 to 31.3.2014
1456	3175	5148

98. The Cost of Secondary fuel oil based on the weighted average price and GCV for the three preceding months from the COD of Unit-I, COD of Unit-II and COD of Unit-III/ is worked out and allowed for purpose of tariff as under:

(₹ in lakh)

2013-14		
30.4.2013 to 11.11.2013	12.11.2013 to 24.3.2014	25.3.2014 to 31.3.2014
1456.04	3174.72	5148.24

Maintenance Spares

99. Maintenance spares claimed by the petitioner for the purpose of working capital are as under:

(₹ in lakh)

2013-14		
30.4.2013 to 11.11.2013	12.11.2013 to 24.3.2014	25.3.2014 to 31.3.2014
1399	2799	4198

100. The cost of maintenance spares (annualised) allowed in working capital is as under:

(₹ in lakh)

2013-14		
30.4.2013 to 11.11.2013	12.11.2013 to 24.3.2014	25.3.2014 to 31.3.2014
1399.30	2798.60	4197.90

O&M Expenses for 1 month

101. O & M expenses for 1 month (annualised) claimed by the petitioner for the purpose of working capital are asunder:

(₹ in lakh)

2013-14		
30.4.2013 to 11.11.2013	30.4.2013 to 11.11.2013	30.4.2013 to 11.11.2013
583	1166	1749



102. O&M expenses for one month has been worked out and allowed as under:

(₹ in lakh)

2013-14		
30.4.2013 to 11.11.2013	12.11.2013 to 24.3.2014	25.3.2014 to 31.3.2014
583.04	1166.08	1749.12

Receivables

103. Receivables equivalent to two months of capacity charge and energy charge for sale of electricity has been calculated on normative plant availability factor. Accordingly, receivables (pro rata) have been worked out on the basis of two months of fixed and energy charges (based on primary fuel only) as shown below:

(₹ in lakh)

	2013-14		
	30.4.2013 to 11.11.2013	12.11.2013 to 24.3.2014	25.3.2014 to 31.3.2014
Capacity Charges- 2 months	9513.86	16048.53	22620.14
Energy Charges- 2 months	10835.28	22240.77	36260.34

104. Necessary computations in support of calculation of interest on working capital are as under:

(₹ in lakh)

	30.4.2013 to 11.11.2013	12.11.2013 to 24.3.2014	25.3.2014 to 31.3.2014
Cost of Coal (2 month)	10835.28	22240.77	36260.34
Cost of Secondary Fuel Oil (2 months)	242.67	529.12	858.04
O&M expense (one month)	583.04	1166.08	1749.13
Receivables (Capacity Charges- 2 months)	9513.86	16048.53	22620.14
Receivables (Energy Charges- 2 months)	10835.28	22240.77	36260.34
Maintenance Spare (20% of the O&M Expenses)	1399.30	2798.60	4197.90
Total Working Capital	33409.44	65023.88	101945.89
Rate of Interest	13.50%	13.50%	13.50%
Interest on Working Capital (annualised)	4510.27	8778.22	13762.69
Interest on Working Capital (pro-rata)	2421.96	3198.64	263.94

Operational Norms

105. The operational norms considered by the petitioner as against the norms specified by the Commission are as under:



	Norms considered by petitioner	Norms specified by Commission
Normative Annual Plant Availability Factor (NAPAF) (%)	85	85
Gross Station Heat Rate (GSHR) (kcal/kWh)	2423.97	2443.11
Auxiliary Power Consumption (APC) (%)	7.55	6.5
Specific Fuel Oil Consumption (ml/kWh)	1.0	1.0

106. The Operational norms considered by the petitioner are in order except for the Auxiliary Power Consumption (APC) wherein the petitioner has sought deviation from the norms specified by the Commission and has prayed for allowing APC of 7.55% in exercise of Power to relax, under the 2009 Tariff Regulations. We now consider the operational norms as under:

Gross Station Heat Rate

107. The petitioner has considered the Gross Station Heat Rate (GSHR) of 2423.97 kcal/kW and has computed the same based on the guaranteed Design Unit Heat Rate of 2276.03 kcal/kWh at 100% MCR and 0% make up water with deviation factor of 6.5% from design heat rate value. The steam pressure indicated is 171kg/cm² and the super heat temperature /reheat temperature (SH/RH) of 540/540 degree centigrade. The ceiling (maximum) norms of Gross Station Heat Rate specified by the Commission is 2443.11 kcal/kWh at steam pressure of 170kg/cm² and super heat temperature /reheat temperature (SH/RH) of 537/537 degree centigrade. Since the GSHR of 2423.97 kcal/kWh considered by the petitioner is below the ceiling norms the same has been considered for the purpose of tariff.

Auxiliary Power Consumption

108. The normative Auxiliary Power Consumption (APC) as per the 2009 Tariff Regulations for a coal based power plant with unit size of 350 MW capacity is 6.0% if boiler feed pumps are steam driven with additional 0.5% for induced draft cooling towers. The petitioner vide affidavit dated 23.1.2015 has pointed out that in some of the Projects with similar sizes units, like Rosa Power Supply Company, Vidharbha Industries, EMCO-GMR etc., the respective State Regulatory Commissions have approved the actual APC of 9% or more. Accordingly, the



petitioner in the said affidavit has prayed that the Commission may consider Weighted Average APC as 9.74% for the year 2013-14 on the ground that the power plant was forced to operate at low plant factor. It has also stated that three Induced Draft Cooling Towers have been installed and the Boiler Feed Water system has 1 x 3 motor driven electric pumps with rating of each of the BFPs as 6000 kW. Thereafter, the petitioner vide affidavit dated 11.4.2014 has sought the relaxation in the APC norms for this Project and has submitted as under:

“(a) The normative Auxiliary Consumption as per the Tariff Regulations is 6.0% or 8.5% depending upon the nature of feed pump (steam driven or electricity driven) with additional 0.5% for inducted draft fooling tower for a coal based power plant with capacity 500 MW & above.As per the EPC contract for the project, the guaranteed auxiliary energy consumptions is 7.55%.

(b)The original norm for a 500 MW unit size was 6.50%, which was later applied to 350 MW unit size as well. The auxiliary energy consumption for a 350 MW unit in reality would be closer towards a smaller unit size such as 250 MW whose normative auxiliary consumption is 8.50%. If a linear relationship is assumed, the auxiliary consumption for 350 MW works out to 7.70% which higher than what the petitioner has submitted.

(c)it is submitted that since the power plant has been designed for the said auxiliary energy consumption, the same has been used by the petitioner for Energy Charge calculation. The petitioner requests the Hon’ble Commission to allow auxiliary energy consumption of 7.55% for tariff calculation.”

109. The petitioner has also submitted that it has installed additional systems to comply with the directives of the Ministry of Environment & Forests, GOI, to meet the zero effluent discharge system to optimize the water usage. Accordingly, the annual energy consumption of these systems based on the usage and APC (%)have been detailed by the petitioner in the following table.

Sl. No.	System	Rating	Purpose	Basis for Consumption		Annual Energy Consumption (Units)
				Working	Standby	
1.	High Concentrate Slurry Disposal (HCSD) system	4 x 600 kW	Bottom Ash & Fly Ash Disposal to Ash pond	1 per unit	1	13402800
2.	Additional water pumping system	3 x 160 kW	Recycling of treated water to Reservoir	2	1	3618756
		4 x 110 kW		2	2	
3.	Ash water	3 x 75 kW	Dewatering of	2	1	1182600



Sl. No.	System	Rating	Purpose	Basis for Consumption		Annual Energy
	reclamation system		Ash pond			
4.	Coal waste water treatment plant	2 x 5.5 kW 2 x 7.5 kW 2 x 22 kW 2 x 7.5 kW	Treatment of coal waste water	1	1	353685
5.	Reverse Osmosis Plant	2 x 1.5 kW 4 x 4.0 kW	Treatment of CW Blow down water for reuse	1	1	79059
				2	2	
Total						18636900
Gross Generation in 2013-14						1290,800,529
Additional APC (%)						1.44%

110. The respondent, GRIDCO has submitted that the petitioner has sought deviation from the specified norms to allow APC of 7.55% as against the specified APC of 6.5% for tariff calculation as a special case and the exercise of the Power to relax is an additional benefit to the petitioner. The respondent has also submitted that the Commission has framed regulations keeping in view that the cost of electricity is recovered in a reasonable manner and at the same time interest of the consumer is safeguarded. It has also submitted that the grant of benefit to the petitioner on account of deviation sought from specified norms would disturb the equilibrium and the same would only result in unreasonable benefit to the petitioner and thus may not be allowed by the Commission.

111. The matter has been examined. The petitioner has submitted that the normative APC (%) allowed as per the 2009 Tariff Regulations is 6.0% with additional 0.5% towards induced draft cooling towers. Considering the normative APC parameters and additional allowance for special features mentioned above, the normative APC allowable would be as under:

Auxiliary Consumption for 350 MW unit	6.00%
Add: Additional Auxiliary Consumption for Induced Draft Cooling Towers	0.50%
Add: Auxiliary Consumption for additional features	1.44%
Total Auxiliary Power Consumption (%)	7.94%



112. It is evident from the submissions of the petitioner that the APC of 7.94% is mainly due to installation of some additional systems like High Concentrate Slurry disposal system, Additional water pumping system, Ash water reclamation system, Coal water treatment plant and Reverse Osmosis system. However, the petitioner has claimed the APC of 7.55% which include High Concentrate slurry Disposal (HCSD) system, additional water pumping system, Ash water reclamation system, Coal waste water treatment Plant and Reverse Osmosis system as part of the auxiliary consumption. In our view the installation of these systems namely, Ash water reclamation, coal water treatment etc. are for meeting the zero discharge of effluents to optimize the water usage as per the environmental norms. The systems for zero discharge of effluents have been installed in most of the existing plants based upon which the APC norm of 6.5 % has been specified by the Commission under the 2009 Tariff Regulations. In case of Indira Gandhi Super Thermal Project of Aravalli Power Company Pvt. Ltd, the generating company (APPCL) had not sought for any relaxation in the APC, even though high density Ash slurry system was installed. In case of smaller size units like Feroze Gandhi Unchahar TPS (2x210 MW) of NTPC, the actual APC during the period 2009-14 was 8.13% with motor driven Boiler Feed Pump and in case the consumption of motor driven BFP is considered as 2.5%, then the APC works out to 5.6%. Also, in the case of Simhadri STPS Stage- I (2x500 MW) of NTPC, the actual APC during the period 2008-13 was 5.58 % with steam driven BFP (which is less than norm of 6%). Considering these factors in totality, we are not inclined to exercise the Power to relax and allow the prayer of the petitioner for relaxation in the APC norm to 7.55% as claimed by the petitioner. Accordingly, the prayer of the petitioner is not allowed and the APC of 6.5% has been allowed in accordance with the 2009 Tariff Regulations for the purpose of tariff.

113. Based on the above discussions, the operational norms allowed to this generating station are summarized as under:

Normative Annual Plant Availability Factor (NAPAF) (%)	85
Gross Station Heat Rate (GSHR) (kcal/kWh)	2423.97
Auxiliary Power Consumption (APC) (%)	6.5
Specific Fuel Oil Consumption (ml/kWh)	1.0



Fixed Charges

114. Accordingly, the fixed charges (pro rata) allowed from the COD of the units of the generating station till 31.3.2014 for 1050 MW capacity is summarised as under:

	(₹ in lakh)		
	30.4.2013 to 11.11.2013	12.11.2013 to 24.3.2014	25.3.2014 to 31.3.2014
Depreciation	6,399.35	7,019.47	499.55
Interest on Loan	12,174.95	12,928.63	890.47
Return on Equity	5,117.72	5,684.55	447.63
Interest on Working Capital	2,421.96	3,198.64	263.94
O&M Expenses	3,757.02	5,098.82	402.54
Secondary fuel oil cost	781.87	1,156.82	98.73
Total Fixed Charges	30652.87	35086.93	2602.87

115. The fixed charges approved as above are applicable corresponding to the capacity of 262.5 MW (25% of 1050 MW) which has been contracted for supply to the respondent beneficiaries.

Other Issues

116. It is noticed that the petitioner has claimed Electricity duty on Auxiliary Power Consumption and Water charges separately. There is no provision under the 2009 Tariff Regulations for considering the payment of Electricity duty on Auxiliary Power Consumption. In view of this, the prayer of the petitioner is beyond the scope of the 2009 Tariff Regulations and hence not considered.

117. The claim of the petitioner for Water Charges separately is not allowed since water charges have already been considered in the O&M expense norms specified under the 2009 Tariff Regulations. It is pertinent to mention that the Commission while rejecting the prayer of NTPC for reimbursement of actual water charges for 2009-14 in Petition No.121/MP/2011 by order dated 10.4.2015 has observed as under:

25. In case of O & M expenses, all factors including the water charges have been taken into consideration while fixing the norms for the period 2009-14. O&M expenses allowed under the 2009 Tariff Regulations are a complete package and water charges are just one element of the package. It is possible that under-recovery of one element may be offset against over-



recovery of another element. Therefore, any one element of O&M charges cannot be considered in isolation.

26. xxxx

28. *If the submission of the petitioner for reimbursement of the water charges on actual basis is accepted, it will amount to allowing the O&M charges on the basis of normative or the actual whichever is higher. Such a dispensation would evoke similar demands from the beneficiaries for reimbursement of expenditure in tariff not at the normative levels but at the lower of the normative and actual. In our view, once the tariff has been fixed on the basis of normative parameters, the same should not be reopened even if there is any variation between normative and actual. During the 2009-14 period, some of the State Governments have enhanced the water charges. It is pertinent to mention that the Commission in due recognition of the escalation of the water charges by some of the State Governments has excluded water charges as a component of normative O&M expenses in the tariff regulation for the period 2009-14 and water charges have been allowed as a pass through during the tariff period 2014-19. Therefore, the impact of enhancement of water charges by some of the State Governments is confined to the period 2009-14 only. In our view, the petitioner should absorb the additional expenditure on account of water charges by offsetting the same against the savings made by the petitioner during the 2009-14 tariff period under other normative parameters including the operating norms."*

118. The prayer of the petitioner in the instant case is accordingly disposed of.

Energy Charge Rate (ECR)

119. Clauses 5 and 6 of Regulation 21 of the 2009 Tariff Regulations provides for computation of Energy Charge for thermal generating stations as under:

"5. The Energy Charge shall cover the primary fuel cost and limestone consumption cost (where applicable), and shall be payable by every beneficiary for the total energy scheduled to be supplied to such beneficiary during the calendar month on ex-power plant basis, at the energy charge rate of the month (with fuel and limestone price adjustment). Total Energy charge payable to the generating company for a month shall be:

(Energy charge rate in ₹ / kWh) x {Scheduled energy (ex-bus) for the month in kWh.}

*6. Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal place in accordance with the following formula:
(a) for coal based and lignite fired stations*

$$ECR = \{(GHR - SFC \times CVSF) \times LPPF / CVPF + LC \times LPL\} \times 100 / (100 - AUX)\}$$

Where,

AUX = Normative auxiliary energy consumption in percentage.

CVPF = Gross calorific value of primary fuel as fired, in kCal per kg, per litre or per standard cubic metre, as applicable.

ECR = Energy charge rate, in Rupees per kWh sent out.

GHR = Gross station heat rate, in kCal per kWh.



LC = Normative limestone consumption in kg per kWh

LPL= Weighted average landed price of limestone in Rupees per kg.

LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month.

SFC = Specific fuel oil consumption, in ml per kWh.

120. The petitioner has claimed an Energy Charge Rate (ECR) of 271.04 paisa/kWh based on the weighted average price and GCV of Coal procured and burnt for the period December, 2011, January, 2012 and February, 2012 and not on based on the price and GCV of coal for the preceding three months from the COD of Unit-I, II and III. Since the same was not in conformity with the regulations, the petitioner was directed to submit the price and GCV of Fuels for preceding 3 months from the COD of Unit-I, II and III. The respondent, GRIDCO has submitted that the ECR as computed by the petitioner is based on large number of variable parameters works out to 204.19 paisa/kWh. It has also pointed out that the energy charge rate quoted by the petitioner in the competitive bidding for tariff under Section 63 of the Electricity Act, 2003 in respect of the State of Haryana State is 90.4 paisa/kWh. Accordingly, the respondent has submitted that there is wide gap in the ECR under the cost plus mechanism and the competitive bidding mechanism which can be attributed to the manipulation of large number of variable parameters in the calculation of ECR.

121. We have examined the matter. In compliance with the directions of the Commission, the petitioner has filed the details of price and GCV of coal for the preceding three months from the COD of Unit-I, II and III. Based on the weighted average price and GCV of coal procured and burnt for the preceding three months from the COD of Unit-I, II and III the ECR is worked out and allowed as under:

Description	Unit	30.4.2013 to 11.11.2013	12.11.2013 to 24.3.2014	25.3.2014 to 31.3.2014
Capacity	MW	350	700	1050
Gross Station Heat Rate	kCal/kWh	2424	2424	2424
Specific Fuel Oil Consumption	ml/kWh	1.0	1.0	1.0
Aux. Energy Consumption	%	6.50	6.50	6.50
Weighted Average GCV of Oil	kCal/l	10750	10706	10600



Weighted Average GCV of Coal	kCal/Kg	3099.00	3025.00	3350.00
Weighted Average Price of Oil	₹/KL	55870.65	60909.31	65848.54
Weighted Average Price of Coal	₹/MT	3203.46	3209.19	3862.66
Rate of Energy Charge ex-bus	Paisa/kWh	266.802	273.822	297.618

122. The Energy charge on month to month basis shall be billed by the petitioner as per Regulation 21 (6) (a) of the 2009 Tariff Regulations.

Application fee and the publication expenses

123. The petitioner has prayed for the reimbursement of tariff filing fees amounting to ₹36.00 lakh towards filing of the petition for 1.4.2013 to 31.3.2014 and the publication fees towards the publication of notice in newspapers as per Regulation 3(8) of the CERC (Procedure for making of application for determination of tariff, publication of the application and other related matters) Regulations, 2004. In terms of Regulation 42 of the 2009 Tariff Regulations and based on our decision contained in order dated 11.1.2010 in Petition No.109/2009, the expenses towards filing of tariff application for the period considered in this order and the expenses incurred on publication of notices shall be directly recovered from the beneficiaries, on *pro rata* basis on production of documentary proof. The excess filing fees, if any, shall be adjusted against the tariff petition filing fees for the next tariff period.

124. The fixed charges approved above are subject to truing up in terms of Regulation 6 (1) of the 2009 Tariff Regulations.

125. This disposes of Petition No.77/GT/2013.

-Sd/-
[A.K.Singhal]
Member

-Sd/-
[Gireesh B. Pradhan]
Chairperson



Calculation of weighted average rate of interest on Loan

(₹ in lakh)

Particulars	30.4.2013 to 11.11.2013	12.11.2013 to 24.3.2014	25.3.2014 to 31.3.2014
Gross loan - Opening	341322.68	343760.62	399466.09
Cumulative repayments of loans upto previous year	0.00	7095.00	7445.28
Net loan -Opening	341322.68	336665.62	392020.81
Add: Drawal (s) during the Year	2437.94	55705.00	1285.00
Less: Repayment (s) of loans during the year	7095.00	350.28	0.00
Net loan - Closing	336665.62	392020.34	393305.81
Average Net Loan	338994.15	364342.98	392663.31
Interest on loan	43664.42	47130.98	51004.21
Weighted average Rate of Interest on Loan	12.881%	12.936%	12.989%

